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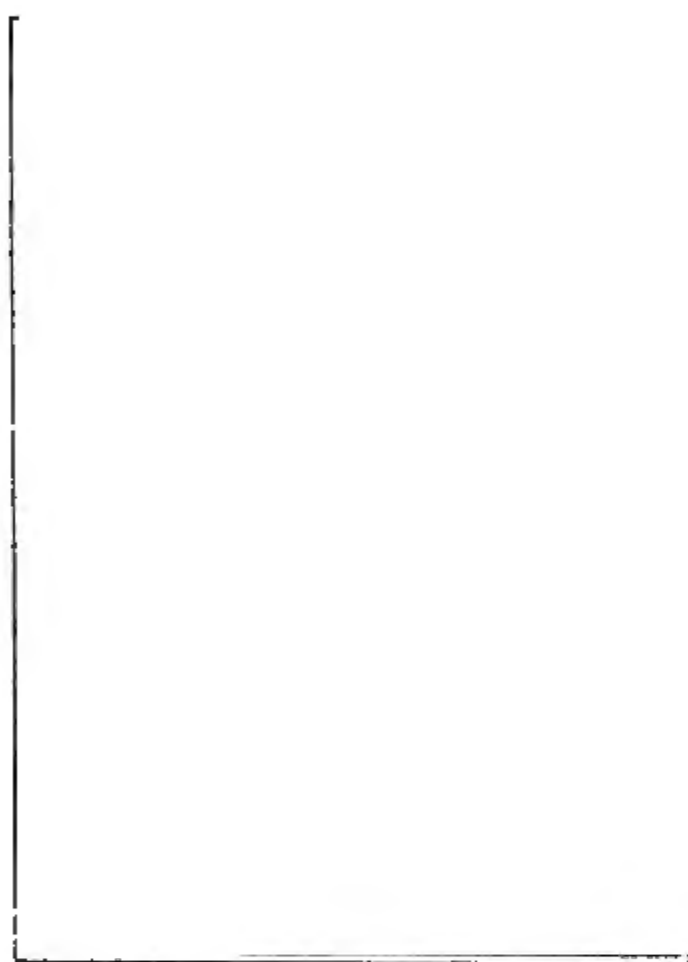
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*New York. Legislature. Assembly*

# DOCUMENTS

OF THE

Assembly of the State of New York.

NINETY-SIXTH SESSION--1873.

VOLUME 3.—Nos. 28 to 33 inclusive.

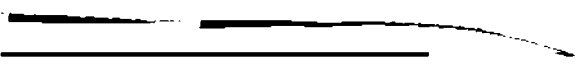
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1873.

NEW YORK: D. VAN NOSTRAND & CO. 1873.







**UNIVERSITY OF THE STATE OF NEW YORK.**

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**EIGHTY-SIXTH ANNUAL REPORT**

**OF THE**

**REGENTS OF THE UNIVERSITY.**

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**TRANSMITTED TO THE LEGISLATURE JANUARY 30, 1873.**

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**ALBANY:  
THE ARGUS COMPANY, PRINTERS.  
1873.**



# STATE OF NEW YORK.

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## IN ASSEMBLY,

January 30, 1873.

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### EIGHTY-SIXTH ANNUAL REPORT

OF THE

REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

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UNIVERSITY OF THE STATE OF NEW YORK,  
OFFICE OF THE REGENTS, ALBANY, *January 30, 1873.* }

To the Hon. ALONZO B. CORNELL,

*Speaker of the Assembly:*

SIR.—I have the honor to transmit the Annual Report of the  
Regents of the University, as required by law.

I remain, very respectfully,

Your obedient servant,

JOHN V. L. PRUYN,

*Chancellor of the University.*



# UNIVERSITY OF THE STATE OF NEW YORK.

## ANNUAL REPORT OF THE REGENTS.

*To the Legislature of the State of New York :*

The Regents of the University, in obedience to law, respectfully submit their

### EIGHTY-SIXTH ANNUAL REPORT,

Exhibiting, in connection with the accompanying documents, the condition of the various institutions composing the University of the State. A catalogue of these institutions, together with a digest of the statutes and ordinances relating to the University, is contained in "*The University Manual*" of 1870.

### BOARD OF REGENTS.

The Board is at present composed of the following members :

JOHN A. DIX, LL. D. . . .	Governor,	} <i>Ex Officiis.</i>
JOHN C. ROBINSON . . . . .	Lieutenant-Governor,	
G. HILTON SCRIBNER . . . .	Secretary of State,	
ABRAM B. WEAVER . . . .	Supt. of Pub. Instruction,	

Other members in the order of their appointment :

Prosper M. Wetmore . . . . .	New York.
John V. L. Pruyn, LL. D. . . . .	Albany.
Robert G. Rankin . . . . .	Newburgh.
Erastus C. Benedict, LL. D. . . . .	New York.
George W. Clinton, LL. D. . . . .	Buffalo.
Lorenzo Burrows . . . . .	Albion.
Robert S. Hale, LL. D. . . . .	Elizabethtown.
Elias W. Leavenworth . . . . .	Syracuse.
J. Carson Brevoort . . . . .	Brooklyn.
George R. Perkins, LL. D. . . . .	Utica.
Alexander S. Johnson, LL. D. . . . .	Utica.

George W. Curtis, LL. D.....	W. New Brighton, S. I.
William H. Goodwin, D. D., LL. D.....	Ovid.
Francis Kernan, LL. D.....	Utica.
Oswald Ottendorfer .....	New York.
John L. Lewis.....	Penn Yan.
Horatio G. Warner, LL. D.....	Rochester.
Henry R. Pierson.....	Albany.
(One vacancy.)	

The officers of the Board are, as follows :

JOHN V. L. PRUYN.....	<i>Chancellor.</i>
ERASTUS C. BENEDICT .....	<i>Vice-Chancellor.</i>
SAMUEL B. WOOLWORTH.....	<i>Secretary.</i>
DANIEL J. PRATT.....	<i>Assistant Secretary.</i>

### STANDING COMMITTEES.

The standing committees of the Board, for the year 1878, are as follows :

#### ON THE INCORPORATION OF COLLEGES AND ACADEMIES.

The Chancellor,	Mr. Hale,
The Vice-Chancellor,	Mr. Kernan,
The Sup't of Pub. Instruction,	Mr. Lewis,
	Mr. Warner.

#### ON THE STATE MUSEUM OF NATURAL HISTORY.

The Governor,	Mr. Brevoort,
The Secretary of State,	Mr. Johnson,
Mr. Clinton,	Mr. Pierson,
	Mr. Leavenworth.

#### ON THE STATE LIBRARY.

The Chancellor,	Mr. Wetmore,
The Governor,	Mr. Perkins,
The Lieutenant-Governor,	Mr. Johnson,
	Mr. Curtis.

#### ON THE INSTRUCTION OF COMMON SCHOOL TEACHERS.

The Sup't of Pub. Instruction,	Mr. Curtis,
The Vice-Chancellor,	Rev. Dr. Goodwin,
	Mr. Ottendorfer.



**ON THE DISTRIBUTION OF THE LITERATURE FUND.**

Rev. Dr. Goodwin,	Mr. Clinton,
Mr. Rankin,	Mr. Burrows,
	Mr. Ottendorfer.

**ON APPROPRIATIONS FOR THE PURCHASE OF BOOKS AND APPARATUS.**

Mr. Brevoort,	Mr. Wetmore,
	Mr. Hale.

**ON THE ANNUAL REPORT.**

Mr. Wetmore,	Mr. Leavenworth,
Mr. Burrows,	Mr. Warner,
	Mr. Lewis.

**ON ARRANGEMENTS FOR THE VISITATION OF COLLEGES AND ACADEMIES.**

The Chancellor,	Mr. Rankin,
The Lieutenant-Governor,	Mr. Warner,
	Mr. Pierson.

**ON PRELIMINARY ACADEMIC EXAMINATIONS.**

Mr. Johnson,	Mr. Rankin,
The Secretary of State,	Mr. Perkins,
The Sup't of Pub. Instruction,	Mr. Curtis,
	Mr. Kernan.

**COLLEGES AND ACADEMIES.**

The institutions subject to the visitation of the Regents, and which are required to make annual reports in relation to their property and system of instruction and discipline, are:

- I. LITERARY COLLEGES.
- II. MEDICAL COLLEGES.
- III. ACADEMIES AND ACADEMICAL DEPARTMENTS OF UNION SCHOOLS.

A list of the institutions composing the University of the State is given, by reference or otherwise, in the appendix to this report.

**REPORTS OF COLLEGES.**

Reports have been received from all the colleges heretofore reporting and in operation during the year 1871-2, except Elmira Female

College, Cornell University, the University of the City of New York and the Medical Department thereof, the Rensselaer Polytechnic Institute and the Homœopathic Medical College. Reports are expected from these Colleges at an early day, and the Regents recommend that such as may be received before this report is printed, be included with those herewith transmitted, as part of the documents hereto annexed.

The aggregate number of students in general literature and science in the several colleges, for the collegiate year 1871-2, was 3,013.

The following table exhibits the comparative condition of the colleges reporting during the last five years :

COLLEGIATE YEAR.	Literary Colleges.	Medical Colleges.	Total.
1867-8 .....	2,502	1,037	3,539
1868-9 .....	2,888	1,018	3,906
1869-70 .....	3,207	1,000	4,207
1870-71 .....	3,276	1,099	4,375
1871-2 .....	3,013	1,099	4,112

#### REPORTS OF ACADEMIES.

The whole number of Academies and Academical Departments of Union Schools, subject to the visitation of the Regents, and in operation at the date of this report, is two hundred and twenty-seven.

#### CONTENTS OF SCHEDULES.

Schedule No. 1 contains a catalogue of the Academies and Academical Departments of Union Schools, subject to the visitation of the Regents, and in present operation, arranged by counties.

No. 2 contains an alphabetical list of all the Academies, etc., reporting, with their respective locations, the names of the principal and officers of the board of trustees of each, the number of members and of the quorum of each board, and the date of the close of the academic year.

No. 3 exhibits the average attendance in each academy, etc., during the several terms of the year, the whole number of pupils taught during the year, the number, sex and average age of those claimed to be classical scholars, or scholars in the higher branches of English edu-

cation, as defined by the statute; the number allowed as such by the Regents, and the amount apportioned to each academy from the income of the literature fund, in January, 1878.

The following table presents a comparative view of the aggregate attendance of pupils during the last three years :

ACADEMIC YEAR.	No. of Academies reporting attendance.	Aggregate attendance.	Average attendance.	CLAIMED AS CLASSICAL, ETC.			Number allowed by Regents as claimed.
				Males.	Females.	Total.	
1869-70.....	182	30,313	164.7	3,816	4,346	8,162	7,456
1870-71.....	188	30,870	161.5	3,095	3,604	6,699	6,049
1871-2.....	198	31,431	162.8	2,729	3,294	6,123	5,783

The reduction from year to year in the number of scholars claimed is mainly due to the operation of the thorough system of preliminary academic examinations instituted by the Regents.

No. 4 shows the number of scholars who have passed the preliminary academic examinations held during the past six years, and who have received certificates to that effect from the office of the Regents.

No. 5 contains tabular statements of the financial condition of the academies reporting, as to their permanent endowments and other property, and the indebtedness, if any, of each academy. The total amount of capital in lots, buildings, libraries, philosophical apparatus, and other property set apart for their support, and their aggregate debts during the last three years, were as follows :

ACADEMIC YEAR.	Academies reporting property.	Fixed Capital.	Debts.
1869-70 .....	196	\$4,343,579 00	\$380,163 00
1870-71 .....	193	4,552,630 00	384,985 00
1871-2 .....	199	4,892,032 00	389,838 00

No. 6 contains the general revenue and expenditure account of each academy.

The total receipts during the years 1871-2, including	
balances on hand at beginning of year, were.....	\$1,048,699 00
Total expenditures, including balances due at begin-	
ning of year .....	1,059,394 00
Excess of expenditures over receipts.....	
	<u>\$10,755 00</u>

No. 7 contains a statement of the number and sex of the teachers employed during the year in all the academies; the number of those who have expressed their intention to make teaching a profession, and the number of volumes in the academy libraries.

The number of teachers reported during each of the last three years, is as follows:

ACADEMIC YEAR.	Academies reporting teachers.	NUMBER OF TEACHERS.			No. who intend to make teaching a profession.
		Male.	Female.	Total.	
1869-70 .....	196	443	618	1,061	648
1870-71 .....	193	461	679	1,140	846
1871-2 .....	196	462	721	1,183	848

The total and average number of volumes in the academy libraries, according to the reports of the last three years, is as follows:

ACADEMIC YEAR.	Academies reporting number of volumes.	Whole number of volumes.	Average number.
1869-70 .....	191	142,999	749
1870-71 .....	193	142,871	738
1871-2 .....	196	147,490	757

No. 8 contains a statement of the appropriations made for the purchase of books and apparatus, pursuant to the provisions of chapter 140 of the Laws of 1834, relative to the application and distribution of the income of the Literature Fund. From this table it appears that up to the 10th day of January, 1873, inclusive, the sum of \$117,935.38 has been granted by the Regents, an equal amount having been raised by the Academies, making a total of \$235,870.76.

No. 9 exhibits a summary of the text-books and their respective authors, in use in the several academies.

No. 10 exhibits the condition of the teachers' classes in the several academies instructing them during the academic year, 1871-2; the sum apportioned to each academy for such instruction, under the provisions of chapter 410 of the Laws of 1855, and the appointments of academies by the Regents to give such instruction during the academic year 1872-3.

### ATTENDANCE.

The reports show a slightly increased attendance over the preceding year.

In addition to scholars who pursued higher studies, after having passed the preliminary examination, there is presented the number who pursued some of those studies, but who had not passed in all the preliminary studies and received the certificate of Academic Scholarship. The numbers are as follows:

1. Pursued higher studies, having passed the examination,	5,817
2. Pursued higher studies, not having passed . . . . .	6,100
	<hr/>
Total number in higher studies . . . . .	11,917
	<hr/> <hr/>

But few scholars pass in all the studies at one examination. They are, therefore, permitted to take one or more higher studies before they receive their certificates. The number who wholly decline the examination is much smaller than formerly. The Regents have not attempted to enforce it, leaving that to the discretion of the trustees of the academies. They look forward with confidence to the time, not far remote, when the distinction of preliminary and academic scholars in academies will not exist, but when every scholar will belong to the latter class.

### LITERATURE FUND.

The last Legislature enacted the following in the General Appropriation Act:

"For the benefit of Academies and Academical Departments of Union Schools the sum of one hundred and twenty-five thousand dollars, or so much thereof as may be derived from a tax of one-sixteenth of one mill upon each dollar of the taxable property of the State, the sum thus arising to be divided as the Literature Fund is

now divided, which is hereby ordered to be levied for each and every year."

This sum, added to the amount now distributed from the income of the Literature Fund and the United States Deposit Fund, will make a total annual distribution of \$165,000. This distribution is made under the statute in proportion to the number of scholars pursuing the classics or the higher branches of English education, or both, after having accomplished certain preliminary studies. The statute further requires that this money shall be applied to the payment of the salaries of teachers. The total of these salaries from all sources, the past year, was \$678,414. This increased appropriation will therefore add to these salaries a little more than eighteen per cent. While the Regents will be greatly gratified by a more liberal compensation to teachers for services too little remunerated, they are of opinion that a part of the large appropriation of last year should be applied in the form of free scholarships, or in such other way as the Legislature in its wisdom may direct, to stimulate scholars to higher efforts, and to secure more thorough instruction in subjects which lie at the foundation of education.

#### MEDICAL EXAMINATIONS.

An act relating to the examination of candidates for the degree of Doctor of Medicine, passed May 16, 1872, directed the Regents of the University "to appoint one or more boards of examiners in medicine who shall faithfully examine all candidates referred to them for that purpose by the Chancellor of the University." In conformity with the requirements of this law, the Regents have, at the request of and on the recommendation of the officers of the Homœopathic State Medical Society, appointed such Board, and each of the persons appointed has signified his acceptance of the appointment. No applications have yet been received for the examination. The Board will soon convene for the purpose of forming a plan of proceeding under the act, and it is expected that applications will soon be made by candidates for the examinations. The requirements of the law will be carefully executed by this Board with the earnest hope that its operation may enlarge and extend medical science and practice.

#### INSTRUCTION OF COMMON SCHOOL TEACHERS.

During the academic year 1871-2, instruction was given, free of charge, to 1,589 scholars in the theory and practice of common school



teaching, by 90 academies appointed for the purpose by the Regents.

The number of scholars, in any academy, for whom such instruction is provided, is limited by statute to twenty each year; and the sum allowed by the State for such instruction is fixed at ten dollars for each full term scholar, no allowance being made for those who attend during a period less than thirteen weeks.

A schedule exhibiting the condition of the classes instructed in the several academies, during the year 1871-2, and a list of the academies appointed to give such instruction during the year 1872-3, are included among the documents appended to this report.

#### UNIVERSITY CONVOCATION.

This voluntary association, composed of the members of the Board of Regents and the officers of the Colleges, Normal Schools and Academies of the State, held its Ninth Anniversary in August last, continuing its sessions, as usual, for three days.

The papers presented and the discussions had, were generally upon subjects of great educational interest and importance, and are deemed worthy of publication as a part of the Appendix to this Report, and also in separate form, in continuation of the series of former years.

In view of the fact that this organization is recognized as an important educational body, and that the early publication of its Proceedings is earnestly desired by the Convocation, as expressed by formal action on the subject, it is respectfully recommended to the Legislature that some proper provision be made for that purpose.

#### VISITATION.

The following institutions were officially visited during the year 1872:

By the CHANCELLOR:

Albany Medical College.

Union College.

By Rev. Dr. GOODWIN:

Hobart College.

Geneva Classical and Union School.

Penn Yan Academy.

Rushville Union School.

Starkey Seminary.

## By Mr. WARNER :

Hobart College.  
Union College.  
Wells College.  
Cayuga Lake Academy.  
Claverack Academy and H. R. Institute.  
Chili Seminary.  
Fairport Union School.  
Friends' Academy.  
Ontario Female Seminary.

## By the SECRETARY :

Rutgers Female College.  
University of the City of New York.  
Adelphi Academy.  
Brooklyn Collegiate and Polytechnic Institute.  
Packer Collegiate Institute.

## By the ASSISTANT SECRETARY :

College of the City of New York.  
Manhattan College.  
St. John's College.  
Albany Medical College.  
Cambridge Washington Academy.  
Carthage Union School.  
Catskill Free Academy.  
Claverack Academy and H. R. Institute.  
Coxsackie Academy.  
Fort Edward Collegiate Institute.  
Fort Plain Seminary.  
Gloversville Union School.  
Holland Patent Union School.  
Lowville Academy.  
New Berlin Academy.  
Norwich Academy.  
Oxford Academy.  
Sandy Hill Union School.  
Schenectady Union School.  
Washington Academy, Salem.

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**CURRENT EXPENSES.**

The current expenses of the Board of Regents for the fiscal year 1871-'2 have been audited by the Comptroller, on whose warrant all bills have been paid by the State Treasurer.

All of which is respectfully submitted.

By order of the Regents,

**JOHN V. L. PRUYN,**

*Chancellor of the University.*

**S. B. WOOLWORTH,**

*Secretary.*

## DOCUMENTS

ACCOMPANYING THE ANNUAL REPORT OF THE REGENTS OF THE  
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# I. ANNUAL REPORTS OF COLLEGES.

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## LITERARY COLLEGES.

### I. COLUMBIA COLLEGE, NEW YORK CITY.

*To the Regents of the University of the State of New York :*

The Trustees of Columbia College respectfully submit the following report for the last collegiate year ending on the 30th day of September, 1872, the close of the financial year, containing a just and true statement of facts, showing the progress and condition of said College during and at the close of the said year, in respect to the several subject-matters following, viz. :

#### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in said College during said year, as established by the Trustees, were the following: 1. Evidences of Natural and Revealed Religion. 2. The Greek Language and Literature. 3. The Latin Language and Literature. 4. The German Language and Literature. 5. Chemistry. 6. Mathematics and Astronomy. 7. Philosophy and English Literature. 8. Mechanics and Physics. An adjunct professorship is attached to the department of Mathematics, and a tutorship to the Classical and English departments.

In the School of Mines the professorships are the following: 1. Mineralogy and Metallurgy. 2. Civil and Mining Engineering. 3. Analytical and Applied Chemistry. 4. General Chemistry. 5. Mechanics and Mining Surveying. 6. Mathematics. 7. Physics. 8. Geology and Palæontology. There are also in this school several assistants to the different departments, and a lecturer on Botany.

In the School of Law the professorships are the following: 1. Municipal Law. 2. Constitutional History and Public Law. 3. Ethics of Jurisprudence. 4. Medical Jurisprudence.

The School of Medicine is separately reported on by its own Board of Trustees.

## 2. TRUSTEES, FACULTIES AND OTHER COLLEGE OFFICERS.

*Trustees.*

Hamilton Fish, LL. D.	John Torrey, M. D., LL. D.
Samuel B. Ruggles, LL. D.	Lewis M. Rutherford.
Gardiner Spring, S. T. D., LL. D.	Thomas De Witt, S. T. D.
William Betts, LL. D.	John C. Jay, M. D.
Benj. I. Haight, S. T. D., LL. D.	William C. Schermerhorn.
Robert Ray.	Morgan Dix, S. T. D.
Gouverneur M. Ogden, Treasurer.	Frederick A. P. Barnard, S. T. D.,
H. J. Anderson, M. D., LL. D.	LL. D., L. H. D.
Edward L. Beadle, M. D.	Samuel Blatchford, LL. D.
George T. Strong.	Stephen S. Nash.
Mancius S. Hutton, S. T. D.	Charles R. Swords.
Horatio Potter, S. T. D., LL. D.,	
D. C. L.	

One vacancy exists occasioned by the resignation of Martin Zborowski.

The officers of the Board of Trustees are a Chairman, a Treasurer and a Clerk. The Treasurer and Clerk are paid officers. The Chairman and other members receive no pay. There have been held within the year, from October 1, 1871, to September 30, 1872, monthly meetings (except for the months of July, August and September) on the first Monday of each month, with the exception of January, 1872, when the meeting was held on Tuesday, the second. The Faculty of said College, including all persons charged with the duty of giving instruction therein during said year, consisted of a President, eight professors, two emeritus professors, two tutors, and an assistant to the Professor of Chemistry. The other officers or servants of said College, charged with duties therein, other than those of public instruction, during said year, were a Chaplain, a Librarian, a President's Secretary, a Janitor and a Sub-Janitor.

The Faculty of the School of Mines consisted, during said year, of a President and eight professors. Other officers giving instruction were a lecturer on Botany, two instructors in Modern Languages, and seven assistants in departments of science. Persons employed and not giving instruction were a Registrar and Librarian, a Janitor and a Sub-Janitor.

The Faculty of the School of Law consisted of a President, four professors and two lecturers.

The school has no other officers receiving pay except a Janitor.

The names of the several persons holding offices or places in said College, during said year, with the offices or places held by them respectively, and the salaries or annual compensation for official services allowed to each of them, including a temporary increase of compensation granted in consequence of the enhanced cost of living at the present time, were as follows :

Names of Persons.	Professorship or other Offices held.	Salary.
Rev. Frederick A. P. Barnard, S. T. D., LL. D., L. H. D.	President*	\$8,000 00
Henry Drisler, LL. D.	Professor	6,000 00
Henry I. Schmidt, S. T. D.	Professor, from General Fund	675 00
Charles A. Joy, Ph. D.	As Prof. of German, the income of the Gebhard F'd	1,272 18
Charles M. Nairne, L. H. D.	Professor*	6,000 00
J. Howard Van Amringe, A. M.	Professor	6,000 00
John Torrey, M. D., LL. D.	Professor	6,000 00
Ogden N. Rood, A. M.	Professor	6,000 00
Rev. Beverly R. Betts, A. M.	Librarian	1,500 00
Rev. Cornelius R. Duffie, S. T. D.	Chaplain	525 00
William H. Walter, Mus. D.	Organist	375 00
William Pistor, E. M.	At different times during the year holding the office of President's Secretary, paid to them in the aggregate, salary, \$1,000 per annum	987 47
J. B. Farrington		
William Leggett		
Charles A. Cushman	Janitor and Assistant Librarian	1,400 00
Stephen R. Weeks	Under-Janitor, wages	600 00
Francis Michaels	Servants—wages \$20 per month during actual employment	180 00
Richard Fitzmaurice		
Henry Binde	Assistant in General Chemistry, \$500 per annum	125 00
J. Leo Lilienthal, E. M.	Assistant in General Chemistry, \$1,000 per annum	750 00
E. J. Hallock, A. M.	Tutor	1,200 00
Augustus C. Merriam, A. M.	Tutor	1,200 00
John D. Quackenbos, A. M., M. D.		

## SCHOOL OF MINES.

Charles F. Chandler, Ph. D.	Professor and Dean	6,000 00
Thomas Egleston, Jr., A. M., E. M.	Professor	5,000 00
Francis L. Vinton, E. M.	Professor	5,000 00
John S. Newberry, M. D., LL. D.	Professor	5,000 00
Frederick L. Stengel	Instructor in German	1,000 00
Jules E. Loipeau	Instructor in French	1,000 00
Paul Schweitzer, Ph. D.	Assistant—salary \$1,000 per annum	883 30
Alexis A. Julien, A. M.	Assistant	1,000 00
Elwyn Waller, A. M., E. M.	Assistant	1,000 00
Thomas M. Blossom, A. M., E. M.	Assistant	1,000 00
Pierre de P. Ricketts, E. M.	Assistant	1,000 00
Henry Newton, A. B., E. M.	Assistant	1,000 00
William Pistor, E. M.	Assistant	1,000 00
Edward C. H. Day	Registrar and Librarian	1,000 00
Charles Richter	Janitor—wages \$50 per month	600 00
Leopold Brown	Under-Janitor—wages \$40 per month	480 00
H. B. Cornwall, A. M., E. M.	Compensation as acting Professor for short term of service	350 00

## LAW SCHOOL.

Theodore W. Dwight, LL. D.	Professor of Municipal Law and Warden†	6,000 00
John Ordronaux, M. D., LL. D.	Professor	800 00
Francis Lieber, LL. D.	Professor	4,000 00
Austin Abbott	Professor (resigned), salary \$3,000.	750 00
Felix Curtis	Janitor—wages \$45 per month	540 00
	Clerk	360 00
William Betts, LL. D.	Clerk of the Board of Trustees	750 00
Gouverneur M. Ogden	Treasurer	6,000 00

\* With the use of a house.

† With a share of fees.

3. NUMBER OF STUDENTS.

The whole number of students, undergraduates in said College during said year, was 116.

The number of Graduates at the annual Commencement, held on the 26th of June, 1872, was 29.

The whole number of Graduates in Arts of the College, is 2,169.

The ages of the students of the several classes, at their last preceding birthday, were, at the beginning of said year, as follows :

	Average age.	Oldest.	Youngest.
Seniors.....	19 $\frac{3}{4}$ years.	27 years.	17 years.
Juniors .....	18 $\frac{7}{8}$ do	22 do	17 do
Sophomores .....	18 $\frac{1}{2}$ do	27 do	16 do
Freshmen .....	16 $\frac{1}{2}$ do	19 do	15 do

The number of Graduates, Engineers of Mines in the School of Mines, at the Commencement, was 8. The total number of Graduates in this school, at the close of this, its eighth year, is 64.

The number of Graduates (Bachelors of Law) in the School of Law at the Commencement, was 99. The total number of Graduates in this school at the close of this, its thirteenth year, was 789.

4. CLASSIFICATION OF STUDENTS.

*Undergraduates.*

Seniors .....	29
Juniors.....	23
Sophomores .....	33
Freshmen .....	31
	— 116

*Students of the School of Mines.*

Third year Students.....	8
Second year Students.....	5
First year Students.....	19
Preparatory Students.....	25
Special Students.....	58
	— 115

*Students of the School of Law.*

Seniors.....	124
Juniors.....	167
	— 291

*Students of the School of Medicine.*

(No classification).....	332
Total .....	— 854

Herewith is presented a copy of the scheme of the last Commencement of the Academic Department and of the School of Mines, held on the 26th June, 1872.

The Commencement of the School of Law was held on the 15th May, and that of the School of Medicine on the 28th of February, 1872.

ONE HUNDRED AND EIGHTEENTH COMMENCEMENT OF  
COLUMBIA COLLEGE,

*Wednesday, June 26th, 1872.*

OVERTURE—"Martha," ..... *Flotow*.  
PRAYER.....By the Rev. C. F. Duffie, D.D., Chaplain of the College.  
"Song Without Words," ..... *Mendelssohn*.  
GREEK SALUTATORY ORATION ..... John Krom Rees.  
LATIN POEM "Fors Omnia Versat,"... .. Edward Lazarus Rosenfeld.  
SELECTION—"Orphée," ..... *Offenbach*.  
ORATION—"From Darkness to Light," ..... Frederic Panet Marshall.  
ORATION—"Student Life," ..... Sidney Gillespie Ashmore.  
WALTZ—"Blue Danube," ..... *Strauss*.  
\* GERMAN ORATION—"Die wahre Würde des Menschen,"... John Holme Maghee.  
ORATION—"Compulsory Education," ..... Frederick Augustus Brown.  
SELECTION—"Huguenots," ..... *Meyerbeer*.  
ORATION—"The Question of the Day," ..... Robert Clarence Dorsett.  
ORATION—"Ideal Excellence in Education," ..... Clarence Cushing Edgerton.  
GALOP—"Idle Wild," ..... *Moscow*.  
ORATION—"Communism: Its Causes, Effects and Remedies,".. Wm. Edgar Keyes.  
ORATION—"Steam vs. Horse; or the Circus and Race-course 50 years hence,"  
Valentine Mott.  
SELECTION—"Perichole," ..... *Offenbach*.  
ORATION—"Free Trade," ..... James Lawrence Onderdonk.  
ORATION—"The Trial of Charles the First," ..... Charles Lancaster Short.  
SONG—"Now the Swallows are Returning," ..... *Abt*.  
\* Excused.

*The names of the Honor Men in the Graduating Class will be announced.*

*The Trustees' Prizes for Excelling in German will be awarded.*

*The English Seminary Prize will be awarded.*

*The Trustees' Greek Prizes will be awarded.*

*The Prize of the Alumni Association, to be given to "the most faithful and deserving Student of the Graduating Class" will be awarded to*

**FREDERIC PANET MARSHALL.**

*Announcement of Results of Competition for Scholarships in the Freshman, Sophomore and Junior Classes.*

*Result of Competition for Fellowship in the Graduating Class.*

*Prizes in the SCHOOL OF MINES.*

WALTZ—"Thousand and One Nights,".....*Strauss.*

*The Degree of Bachelor of Arts will be conferred on the Members of the Graduating Class.*

ROBERT ARNOLD.	EDMUND MCCAFFIL.
SIDNEY GILLESPIE ASHMORE.	VALENTINE MOTT.
FREDERICK AUGUSTUS BROWN.	LUDLOW OGDEN.
ROBERT CLARENCE DORSETT.	RICHARD OGDEN.
CLARENCE CUSHING EDGERTON.	JAMES LAWRENCE ONDERDONK.
HALIBURTON FALES.	AUGUSTUS COE PIRSSON.
EDWARD FERMOR HALL.	JOHN KROM REES.
ROBERT RAY HAMILTON.	EDWARD LAZARUS ROSENFELD.
SCHUYLER HAMILTON, Jr.	CHARLES LANCASTER SHORT.
WILLIAM HENRY HALDANE.	EDMUND GRINDLE RAWSON TRIMBLE.
WILLIAM EDGAR KEYES.	ARTHUR DELANO WEEKS.
CHARLES HENRY KNOX.	ROBERT HENRY WILKINSON.
JOHN HOLME MAGHEE.	HENRY DUNCAN WOOD.
FREDERIC PANET MARSHALL.	HENRY EDGAR WOODWARD.

*The Degree of Engineer of Mines, Civil Engineer, and Bachelor of Philosophy, will be conferred on the Graduating Class of the School of Mines.*

*The Degree of Master of Arts will be conferred on candidates in course.*

*Honorary Degrees will be conferred.*

GALOP—"Hurry Scurry,".....*Fredhe.*

VALEDICTORY ORATION.....*Robert Ray Hamilton.*

BENEDICTION.

*College Airs.*

HONOR MEN—CLASS OF '72.

*First Class of Honor.*

1. JOHN KROM REES.
2. EDWARD LAZARUS ROSENFELD.

*Second Class of Honor.*

1. FREDERIC PANET MARSHALL.
2. SIDNEY GILLESPIE ASHMORE.
3. JOHN HOLME MAGHEE.

*Committees.*

H. DUNCAN WOOD, Chairman.

SIDNEY G. ASHMORE.	E. FERMOR HALL.	FREDERICK A. BROWN.
WILLIAM E. KEYES.	R. CLARENCE DORSETT.	VALENTINE MOTT.
	JOHN KROM REES.	

*Grand Marshal.*

SCHUYLER HAMILTON, Jr.

Music by Eben's Orchestra.



The Degrees conferred were as follows :

Degree of Bachelor of Arts, upon graduates of the Academical Department, at Commencement, 28, and subsequently to Commencement 1, total 29 ; Degree of Master of Arts, upon members of class of 1869, 25 ; Degree of Engineer of Mines, conferred upon graduates of the School of Mines, 8 ; Degree of Bachelor of Laws, conferred upon the graduates of the Law School, 99.

The following Honorary Degrees were also conferred :

*Doctor of Laws.*

Prof. Isaac Lewis Peet, Principal of the Institution for the Deaf and Dumb, New York city.

Prof. John Graeff Barton, Professor of the English Language and Literature in the College of the City of New York.

Rev. Howard Crosby, S. T. D., Chancellor of the University of the City of New York.

*Doctor in Sacred Theology.*

Rt. Rev. William Bell White Howe, Bishop of South Carolina.

Rev. Eliphalet Nott Potter, President of Union College.

Rev. James Starr Clark, Rector Trinity Church, Madalin, New York.

*Master of Arts.*

Gen. John Watts De Peyster, of New York.

Edward David Hearn, of London.

6. COLLEGE TERMS.

The terms or sessions for studies in said College during said year were two, as follows :

The first term commencing on the first Monday in October, and ending about the middle of February. The second term following the first without an intervening vacation, and closing on the last Wednesday in June.

The following is a copy of the calendar for the next College year :

*Calendar.*

October 7, 1872. First term, 119th year, begins on Monday.

November 28. Thanksgiving Day, Thursday.

December 23. Christmas Holidays begin on Monday.

January 4, 1873. Christmas Holidays end Saturday.

January 24. First term ends Friday.

- February 3. Intermediate Examination begins Monday.  
 February 13. Second term begins Thursday.  
 February 26. Ash Wednesday, Holiday.  
 April 11. Good Friday, Holiday.  
 April 14. Easter Monday, Holiday.  
 May 30. Second term closes Friday.  
 June 2. Concluding Examination begins Monday, for Seniors.  
 June 9. Concluding Examination begins Monday, for other classes.  
 June 20. Examination for Admission, Friday.  
 June 25. Commencement, Wednesday.  
 October 3-4. Examination for Admission, Friday and Saturday.  
 October 6. First term, 120th year, begins Monday.

#### 7. COURSE OF INSTRUCTION.

The Sub-Graduate course of study in each class in said year was as follows :

##### *Senior Class.*

The section of the Senior Class reciting in Greek have read the "Gorgias" of Plato with the Jay Professor. Greek during the Senior year is one of the elective studies.

The section of the same class reciting in Latin have read through the "Captive" of Plautus, with special attention to the metres and the archaic forms and syntax; also the first chapter, and one hundred and thirty-one sections of the Tenth Book of Quintilian.

This reading has been accompanied with lectures on the dramatic and the rhetorical literature of Rome. Latin is likewise an optional study with this class.

In Chemistry, the Senior Class, as a whole, have attended lectures during six months, on the Metals, twice a week. The same amount of time has been devoted weekly, during the second term of the year, to Geology by lecture and recitation. A section of the class have also attended lectures on Technology and on Organic Chemistry by the same professor, as optional studies; three hours per week being given to each subject for one-half the year.

In the Department of Mathematics and Astronomy, the whole class received instruction in Astronomy three times a week during the first term; accomplishing the whole of White's Astronomy, with lectures, explanations of instruments, and optical illustrations with the oxyhydrogen lantern. To the matter of the text-book was

added, by lecture, an amount equivalent to one-half the text or more.

A section of the class attended the same professor twice a week throughout the year in the differential and integral Calculus as an optional study, completing the whole of Peck's Calculus without omission.

In Physics, during the first term, were taught by lectures, with recitations, to the entire class, several branches of the sciences of Optics, embracing the properties of light, and its velocity, reflection, refraction and dispersion, with the description and theory of optical instruments. During the second term, the subject was Acoustics, comprehending the velocity, refraction and interference of sound; the vibrations of strings, rods, plates, bells and columns of air in tubes, with the theory of the different kinds of musical pipes; also the theory of over-tones and Klang farben, the characteristics of the human voice, and the mechanism of the ear. A section of the class, pursuing the Higher Physics as an optional study, were instructed during the first term in the principles of the undulatory theory of light, and the doctrine of interferences, with its application to the explanation of the colors of thin plates and ruled surfaces, and analogous phenomena. During the second term, the same section continued the same study, with especial reference to the explanation by the undulatory theory of the polarization of light in all its modes, as plane, circular and elliptical polarization.

In the Department of Philosophy and English Literature, a section of the class has received instruction throughout the year, by lectures and text-books, in the philosophy of the intellect and of the feelings. The lectures have been numerous and full. The text-books consulted have been "Hamilton's Metaphysics" and "Hickok's Empirical Psychology;" attendance three hours per week.

The whole class have studied, in the same manner, the philosophy of the sense and the understanding, and have discussed many points in original philosophical essays. The whole class has also studied Fancett's small treatise on political economy; attendance twice a week during the second session.

### *Junior Class.*

The Junior Class have read, in Greek, the "Œdipus Rex" of Sophocles, and the "Apology" and "Crito" of Plato. In Latin, the same class have read the first, third, fourth, fifth "Satires of Juvenal," making metrical translations of portions; and thirty-one chapters of

the first book of Cicero "de Officiis." They have had exercises in writing Latin after Cicero, and lectures on the "Roman Satirists" and Roman Philosophy; hours of attendance, three per week throughout the year.

In General Chemistry, embracing the non-metallic elements, and the metallic elements in parts, the class have been under instruction two hours per week throughout the year.

In Mechanics, they have attended twice per week throughout the year, completing the whole of Peck's Mechanics without omission. In addition, they have received some theoretic lectures, and a complete course of experimental illustration with the usual apparatus.

In the Department of Philosophy and English Literature, this class have been carried through a full course of English Prosody, with scanning and verse making. They have read the greater part of the first book of Spenser's "Faery Queene," interpreting and criticising the first two cantos with much minuteness. Each student of the class has also declaimed a piece of his own composition each month of the academic year, except the first and the last. In Physics, two hours per week have been occupied with the class throughout the year. The subject of instruction during the first term was heat, which was studied and experimentally illustrated in its phenomena and its effects, as exemplified in the expansions of solids, liquids and gases, the conductive power of bodies, the properties of vapors and their tensions, the latent heat of different bodies, and the matter of its several physical conditions, and the constitution and economy of the steam-engine.

During the second term, the class were engaged in the study of magnetism, electricity, frictional and voltaic, electro-magnetism, and electric and magnetic induction.

#### *Sophomore Class.*

In Greek, the Sophomore Class have attended three hours per week throughout the year, and have read the "Medea of Euripides" and the first book, and parts of the second and fourth books of Xenophon's "Memorabilia."

In Latin, the same class have read the first book of the Satires of Horace, with exercises in prosody, and fifteen chapters of the first book of the "Annals," and all the "Germania" of Tacitus. The class have made metrical versions of portions of their reading in poetry, and have written Latin after the style of Tacitus. A lecture has

been given them on the Roman Historians; attendance, three hours per week throughout the year.

In Roman History, they have accomplished all that is contained in Willson's Outlines, with a few omissions, and in Grecian Antiquities, they have read from the beginning of "The Heroic Age" to the subject of "Finance at Athens," with sundry omissions. In connection with both subjects, numerous explanatory lectures have been given by the Professor in charge of their branch of instruction. The hours of attendance have been two weekly throughout the year. Under the direction of the same Professor, the class have been required to prepare original compositions once a month, which, after having been scrutinized by the Professor, have been severely criticised, each in presence of its author. In Mathematics, this class attended the Adjunct Professor four times a week during the first term, completing the subjects of plane, analytical and spherical trigonometry and mensuration as contained in Davies' Legendre, together with the solution of many practical problems by construction.

During the second term, the class received instruction three times a week from the principal Professor, giving two days per week to Analytical Geometry, and one day per week to Surveying. In the former subject, they completed four books of Davies' Analytical Geometry, with numerous extra problems and exercises. In Surveying, the lectures embrace a complete description of all the instruments employed, with the methods of using them in all the branches of plane and geodic Surveying.

In Modern History, instruction has been given to this class three times a week, Willson's Outlines having been employed as a text-book. About four hundred and sixty pages of the text-book have been read, extending from the "Middle Ages" through the history of the nineteenth century to the year 1871. Additional instructions have been simultaneously and continuously given, derived from the principal standard writers of modern history. In addition to the history of modern nations, their Geography has been also taught and made interesting by reference to various standard works of travel.

The method of daily examination consisted, to a large extent, of written sketches, prepared in presence of the class by individual students, upon the black-board.

One hour weekly has been given with this class to the declamation of selected passages of prose or poetry.

*Freshman Class.*

The Freshman Class, during the first session, read in Greek a part of the second book, all of the third, and a part of the fourth book of Homer's "Odyssey," attending to scanning and to grammar as far as the construction of moods, with weekly recitations upon the paradigms of verbs. During the second session, the text-book has been Herodotus, the first forty-eight chapters of the seventh book having been read. Weekly recitations have also been conducted upon the syntax of moods, in Hadley Grammar, including his treatment of the infinitive and participle, and relative, interrogative and negative sentences; attendance three hours per week.

In Latin, this class read, during the first term, the usual number of selections from the Odes and Epodes of Horace, about thirty in all, particular attention being paid to the scanning. Weekly recitations were held upon the Syntax of nouns in Harkness' Grammar, going over the whole subject as there exhibited, with exercises in composition from the examples given in the Grammar.

During the second session, all of Cicero "de Senectute" has been read. Weekly written exercises upon Harkness' Modal Constructions, with composition of Latin, have been continued as in the first. Attendance in Latin has been also three times a week. In Mathematics, this class, during the first session, completed all the nine books of Davies' Legendre, containing plane, volumetric and spherical Geometry. During the second session, they have finished Davies' "University Algebra" complete, including the Appendix. Attendance five times in the week throughout the year.

In Ancient History, this class have read portions of Willson's Outlines, commencing at the title "Early Ages of the World," and continuing through all of "Grecian and Contemporary History," with few omissions. In Anthon's Manual of Roman Antiquities, they have also read from the beginning of the "City" to the end of "Games of Chance," with accompanying lectures. Two hours per week have been occupied with this study.

In the Department of English, rhetoric has been, with this class, the principal subject of study, occupying two hours in each week; Quackenbos' "Course of Composition and Rhetoric" being employed as a text-book, which work has been substantially completed. Other authorities have been also referred to and their different modes of treating the subject presented. From these sources the class have been furnished with many instructive examples. The plan of black-

Declamations from a portion of every class except the Senior, take place weekly, and are criticised by the Professor upon the spot. The Juniors are required to deliver speeches of their own composition. No extemporaneous debates are required, nor any gymnastic or military exercises; nor is practice required in reading aloud, or in any other of the branches of elementary education.

#### 9. EXHIBITIONS AND PRIZE CONTESTS.

The only public exhibition established by statute, to be holden in the College, is that of the annual Commencement.

A "semi-annual" exhibition is usually held during the winter by the voluntary action of the students themselves, of which the literary performances are not prepared under the direction of the Faculty. Exhibitions are also sometimes given by the literary societies. Prizes are awarded for excellence in scholarship, or for meritorious conduct, as follows:

1. *For Proficiency in German.* After the concluding examination, there is awarded to the best student of German in the Junior Class a prize of money, or its equivalent at his option, of thirty dollars; and to the next best, a prize of twenty dollars. In like manner, to the best student in the Sophomore Class a prize, as before, of thirty dollars; and to the next best one, of twenty dollars.

2. *Prize of the Alumni Association.* A prize of fifty dollars in money, or its equivalent, at the option of the receiver, established by the Association of the Alumni of Columbia College, was first awarded at the Commencement in June, 1858.

Its conditions are, that it be given to the most faithful and deserving student of the Graduating Class.

Three are to be selected by the Faculty and submitted to the class, who from these three are to designate one to receive the prize.

3. *Scheme of two Annual Seminary Prizes*, founded November, 1851, in Columbia College, by the Rev. Dr. John McVickar, for the Society for Promoting Religion and Learning, and for which an endowment of \$1,000 is provided on the following conditions:

1. The first, to be entitled "The Society's Greek Seminary Prize of Thirty Dollars," to be annually competed for among such members of the Graduating Class as shall have given in their names to the President, at least once a month previous to such competition, as candidates for the General Theological Seminary of the Protestant Episcopal Church, each student giving in his name as "Competitor,"



to designate the prize for which he contests, and to be confined to the choice then made. The examination for such prize to be held publicly in the chapel, and separate from general examination.

I. The Epistles of the New Testament (in Greek), "*ad aperturam libri.*"

II. On some of the early Greek Fathers, to be designated at the time of noticing the prize; or, if none be designated, then upon some portion of the Chrysostom or Athanasius, at the choice of the student.

The decision to be with the President and Greek Professor.

2. The second, to be entitled "*The Society's English Seminary Prize of Twenty Dollars,*" to be annually competed for as before, and to consist in the production of an essay (to be publicly read or not, as the President may determine), of the ordinary length of a pulpit discourse, on some subject connected with the course of evidences on which the class has been engaged, such subject to be selected by the Professor of the Evidences, and given out by him at the time of notice; and the prize to be adjudged as before by the President and Professor of that branch; such decision to have respect to—

I. The general ability and soundness of the essay.

II. Its logical and demonstrative form; and

III. The pure Saxon style and idiom in which it is written.

The name of the successful candidate to be enrolled in a suitable book to be provided for that purpose, lettered appropriately, and kept on the Library table, to be announced with other honors on the Commencement day; and also recorded honorably in the Society's books.

4. *Junior Prizes in Greek.* For the encouragement of proficiency in the Greek language and literature, two prizes have been established, to be annually awarded to members of the Junior Class, under the following:

An annual prize of the value of three hundred dollars is awarded to the student of the Junior Class who shall pass the best examination on an entire play of *Æschylus*, *Sophocles* or *Euripides* which has not been a subject of College study in that class; and a second



Class as have been members of the College for two years, and appeared in any term, or examination record, deficient in scholarship in any department of study.

The examination for the prizes are to be held within one week after the concluding College examination, and to be conducted by a committee of three, appointed by the President, who are to be selected from among the Alumni not connected with the College, and the Professors in the Classical departments. It is to be in writing, and to have reference to the subject-matter as well as form of the play, the title of which shall be assigned at the beginning of the academic year by the Professor of Greek, with the approval of the President. The examiners may, in their discretion, subject all or any of the competitors to a *viva voce* examination, in addition to the written examination above described.

The competitors are to be all subject to the same tests; the result of the examination is to be estimated according to a scale of values previously assigned to the questions.

The student whose performances receive under this regulation the highest number of marks, is entitled to the first prize, provided such number does not fall below a fixed minimum standard previously determined; and the student whose total is next in amount to the highest, is entitled to the second prize, with the same proviso.

The names of the successful competitors are to appear in the College Catalogue, and it is the duty of the President to cause the same to be published in three daily papers of this city as soon as the award is made known.

5. *Prize Scholarships and Fellowships.* By a recent resolution of the Board of Trustees, there have been established in the College twelve Scholarships, of the annual value of one hundred dollars each, and two Fellowships of the annual value of five hundred dollars each.

Two of the Scholarships are offered for competition to members of the Freshman Class, one in the Classics, and the other in the Mathematics.

Four are offered for competition to members of the Sophomore Class, two in the Classics and two in the Mathematics.

Six are offered for competition to members of the Junior Class, three in Literary and three in Scientific Studies, viz.: one in Latin, one in Logic and English Literature, one in History and Rhetoric, one in Chemistry, one in Mechanics and one in Physics.

The examinations of these Scholarships are to be held immediately after the final examination of the classes for the year.

The Fellowships are offered for competition to members of the Senior Class, at the close of the academic course. One of these is a Fellowship in Literature, the other a Fellowship in Science. The subjects of examination for the Fellowship in Literature are Greek, Latin, and Intellectual and Moral Philosophy, and those for the Fellowship in Science and Chemistry, Geology, Astronomy, the Calculus and Physics.

The Fellows are required to continue their studies, under the direction of the President, for the term of three years; at the end of which time the Fellowship expires by limitation. They may study at the College or elsewhere, in the United States or abroad; but, in any case, they will report to the President at such intervals, and in such mode as he may prescribe.

#### 10. EXAMINATIONS.

The requirements for admission, as published in the Annual Catalogue, are as follows:

Applicants for admission to the Freshman Class, are examined in the English, Latin and Greek Grammar; Greek and Latin Prosody and Composition; Ancient and Modern Geography; Arithmetic, including the Metric System of Weights and Measures; Algebra, as far as the end of simple equations, and four books of Davies' Legendre's Geometry; and the following books, or their equivalents, in the Latin and Greek languages, viz.: "De viris illustribus urbis Romae;" Cæsar's Commentaries, de Bello Gallico, the whole; six books of Virgil's *Æneid*, six orations of Cicero; the selections from Lucian in Jacobs' Greek Readers; three books of Xenophon's *Anabasis*, and two books of Homer's *Iliad*.

Applications for admission are received, and candidates are examined on Friday next preceding the annual commencement in June; on the Friday preceding the opening of the first academic session in October, and at any time during the progress of scholastic exercises, but not during the vacation. Entrance examinations were held for the academic year 1871-2, on the 23d June and the 29th September, 1871. Candidates are sometimes received who are not in all respects perfectly prepared, with conditions to be subsequently fulfilled.

None but matriculated students are allowed to attend the classes

upon any pretext whatsoever, without the special permission of the Board of Trustees.

Candidates for advanced standing are examined on the studies which have been previously pursued by the classes which propose to enter. Candidates from other colleges are required to present certificates of admission in good standing.

There are two examinations of all the classes every year. The one commences on the first Monday in February, and the other on the first Monday in June. The latter is called the concluding examination of the academical year; the former, the intermediate examination. These examinations are open to the public.

Simultaneously with the concluding examination of the year, is held *an examination for honors*, attended by such members of the Senior Class as have given notice to the President, before the first day of January preceding, of their desire to compete. No public honors are conferred except upon the successful competitors in this competition.

In addition to the public examinations, private examinations are held monthly in all the classes, and in every department, for the purpose of ascertaining the proficiency of the students in their respective studies.

In each of the semi-annual examinations, the several classes are examined on *all* the subjects they have been pursuing during the previous half-year. A record is preserved of all the monthly and semi-annual examinations. The semi-annual examination has a weight equal to that of all the monthly examinations of the same half-year united. The general proficiency of each student is determined by the sum of these records, but the results are not published nor made the basis of any academic distinction.

#### 11. MODE OF INSTRUCTION.

The mode of instruction practiced in the classes generally is to combine recitation from text-books, by the student, with expository lectures upon the immediate text, or upon the general subject, by the instructor. In recitation, the student is required to analyze the passages recited and to show what ideas he has derived from them. In languages, great attention is paid to grammatical forms and to syntax, and during the earlier portions of the course especially, reference is constantly made to first principles, exercises in Grammar being kept up simultaneously with translation. In the latter years,

direct exposition by the Professor is more largely employed, but the proportion of time given to this exercise cannot be exactly stated, as it is determined by the apparent wants of the class, or the degree to which, in particular topics, their knowledge seems to be defective.

In teaching the Mathematical branches the same principle governs. Expository lectures are given whenever they seem to be needed, and an exercise is made sometimes to consist in part of recitation and in part of lecture. In Philosophy, the method of teaching is wholly by lecture, the student being required to take notes, which are subject to the examination and criticism of the Professor. In Chemistry, Physics and Astronomy, teaching is by lecture, with references to books, the students also taking notes, to be examined and criticised by the Professor. The students are also orally examined in all subjects taught by lecture; one hour devoted to examination usually succeeding two given to lecture.

## 12. DISCIPLINE.

The discipline of the College is of the simplest kind. The students are expected to make the common rules of gentlemanly propriety and courtesy the guide of their conduct, and with hardly any exception they may be said to do so. Should, however, any case of misconduct occur, it is in the first instance referred to the President; but a student may be summoned before the Faculty by any officer for conduct unbecoming a gentleman, and after fair hearing his case will be adjudicated according to its merits. Cases requiring censure are happily almost unknown.

## 13. GRATUITOUS AID.

During the year ending September 30, 1872, nineteen undergraduate students received their tuition in the College free of charge, and forty-two in the School of Mines. The following provisions are made for free scholarships in the College, and others identically the same exist in the School of Mines: The Society of the Alumni of Columbia College is entitled to have always four Students; the Corporation of the City of Brooklyn, the Trustees of the Mercantile Library Association, the Trustees of the American Institute, the Trustees of the Mechanics' Institute, and the Trustees of the General Society of Mechanics and Tradesmen of the City of New York, are entitled to have always two students; and the Cor-

poration of Jersey City is entitled to have always one student educated in the College free of all charges for tuition.

Every religious denomination in the city of New York is entitled to have always one student, who may be designed for the ministry, educated in the College free of all charges for tuition.

Every school from which there may be admitted, in any one year, into the College four students who pay their matriculation fees, may have the privilege of sending one scholar to be educated gratuitously in the College.

It is the desire of the Trustees to extend the educational advantages of the College to deserving young men as widely as possible. In the following standing resolution they therefore offer free tuition to such under the circumstances therein specified, it being understood that in the application of these resolutions a liberal construction shall be given them, and that all such arrangements shall be private.

*Resolved*, That whenever it shall appear to the satisfaction of the President and Treasurer that a student, who is of good moral character and industrious habits, is unable to pay his fee for tuition, such student may be permitted to proceed without charge; or, in case he shall so elect, he may give his note for the amount, payable at his convenience after graduation.

#### 14. CHARGE FOR TUITION AND BY-LAWS.

The charge for tuition was \$100 dollars per annum in the College and in the School of Law; in the School of Mines it was \$200 per annum. The by-laws have remained unchanged.

#### 15. DESCRIPTION OF THE VALUE OF BUILDINGS, ETC.

The buildings of the College consist of the main building, devoted to instruction in the Undergraduate Course and in the Course of the School of Mines; the Chapel and Library; the School of Mines; building for the collections and instruction in that school, and houses respectively for the President, two Professors and the Janitor. These occupy the grounds described in the last and preceding reports to the Regents, comprising the block of ground bounded by the Fourth and Madison avenues and Forty-ninth and Fiftieth streets.

Value of College buildings and grounds appurtenant

thereto, estimated at..... \$400,000 00

The number of volumes in the General Library of the College is 15,526; the number of pamphlets, about

Brought forward.....	\$400,000 00
4,100 unbound, and 1,500 bound in 150 volumes, not included in the above enumeration. This Library is estimated to be of the value of.....	39,000 00
In the Law Library in use for the Law School of Columbia College there are about 3,860 volumes, of the estimated value.....	7,750 00
The Library in the School of Mines consists of about 4,200 volumes, valued at.....	13,000 00
The Botanical Library consists of about 1,130 volumes, valued at .....	3,600 00
The Chemical and Philosophical Apparatus and Cabinets, exclusive of those of the School of Mines and of the Herbarium, are valued at.....	25,000 00
The Chemical and Philosophical Apparatus, Cabinets and Collections of the School of Mines are valued at.	90,000 00
The Herbarium is valued at.....	13,500 00
<hr/>	
Total amount invested as above for purposes of instruction .....	<u>\$591,850 00</u>

#### 16. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

1. *Real Estate.* The College owns land in College place, Park place, Murray, Robinson, Barclay and Greenwich streets, subject to long leases of divers and separate lots, the rents derived from which are in some cases disproportionate to the present value of the land. It now yields a net income of five per cent upon a capital of..... \$1,908,933 20

The College also holds two hundred and sixty-four lots of land (as now divided), described in previous reports, and situated between the Fifth and Sixth avenues and Forty-seventh and Fifty-first streets; all these lots are under lease, and nearly all of them are improved by the erection thereon of buildings, which in every case belong to the lessees. It is difficult to ascertain the assessed value of the property, or to state the value of the interest of the College therein, except so far as it

may be estimated from the rents. The rents reserved by the leases of the estate amount in the aggregate to \$102,088.67; and, in any year in which they shall all be payable, will yield a net income of five per cent on a capital of ..... \$2,041,773 40

2. *Personal Property.* The College held at the end of the financial year, on the 30th September, 1871, a bond given by a lessee for ..... \$842 55

Invested by deposit with the New York Life Insurance and Trust Company ..... 58,966 74  
Cash balance in bank at the end of the year. 2,930 85

With the following investments:

Registered bonds of the United States for. 24,950 00  
A bond of the State of New York for.... 10,000 00  
Bonds and mortgages for.....136,000 00

Together amounting to ..... 233,720 14

Showing a total estimated value of the property which can be applied to the general purposes of the College to be.....\$4,184,426 74

The Gebhard Fund is applicable only to the support of a Professorship of the German Language and Literature, and is now invested on bond and mortgage. The investment and application of the fund are in accordance with the intentions of the donor. Its amount is now..... 21,375 00

Total estimated value of the property of the College, other than so much thereof as is included under head 15.....\$4,205,801 74

#### 17. DEBTS.

The whole amount of debts contracted by Trustees, and remaining unpaid at the end of the year, was..... \$1,240 00



## 18. REVENUE.

## 1. Amount charged for tuition :

Fees of Undergraduates.....	\$9,050 00	
Fees of Law Students .....	27,535 00	
Fees of Students of the School of Mines,	12,270 00	
Fees for diplomas in the College .....	290 00	
Fees for diplomas in the Law School..	505 00	
	<hr/>	\$49,650 00

2. Receipt from Students of the School of Mines, for  
breakage and supplies ..... 2,330 89

3. There was no charge for room rent or use of Library,  
etc.

4. Interest or income of the permanent funds of the  
College accrued during the said year, which has been  
collected, or is considered collectible. The interest  
derived from the personal funds of the College, other  
than the Gebhard Fund, and from the temporary  
investment of part of the revenue, was..... 13,244 14

Income from other sources ; rents for the said year col-  
lected ..... 174,938 65

Interest on rents..... 241 44

Total revenue from the above sources..... \$240,405 12

## 19. EXPENDITURE.

The whole expenditures applicable to said income, paid or payable  
for said year, are as follows :

Salaries of officers of the College..... \$67,617 47

Interest accrued during the year on debts of the Col-  
lege..... 698 60

Repairs of College property..... 872 13

Fuel and all other incidental expenses of the College.. 14,193 34

Salaries of officers of the Law School..... 12,450 00

Repairs of the Law School ..... 426 48

Fuel and all other incidental expenses of such school.. 14,406 55

Salaries of officers of the School of Mines..... 32,473 02

Fuel and all other incidental expenses of such school.. 19,056 66

Expenses of Treasurer's and Clerk's offices, and of  
estate, including taxes and assessments..... 10,046 59

Total expenditure..... \$172,240 84



## SCHOOL OF MINES.

This school commenced operations November 15, 1864. Its object is to furnish the student the means of acquiring a thorough, scientific and practical knowledge of those branches of science which relate to mining and the working up of the mineral resources of this country, and to supply, to those engaged in mining and metallurgical operations, persons competent to take charge of new or old works, and conduct them on thoroughly scientific principles.

The method of instruction is by lectures given by the corps of professors, practice in chemical and metallurgical laboratories, proposals and drawings for practice for the establishment of metallurgical works and for mining.

By a recent act of the Trustees, the course of study in the school has been enlarged, so as to include five parallel courses of instruction :

1. Mining Engineering.
2. Civil Engineering.
3. Metallurgy.
4. Geology and Natural History.
5. Analytical and Applied Chemistry.

The requirements for admission have been somewhat increased, and a preparatory year has been added, to enable those who are not fully qualified to prepare for the examination for admission.

## SYNOPSIS OF STUDY—FIRST YEAR.

*First Session.* Analytical Geometry ; Descriptive Geometry ; Inorganic Chemistry ; Qualitative Analysis ; Mineralogy ; Botany ; French ; German ; Drawing.

*Second Session.* Calculus ; Descriptive Geometry ; Organic Chemistry ; Qualitative Analysis ; Mineralogy ; Zoology ; French ; German ; Drawing ; Stoichiometry.

(Analytical Geometry and Calculus are optional for Students pursuing the Geological and Chemical courses. Organic Chemistry and Inorganic Chemistry are optional for Students pursuing the Engineering courses.)

## SUMMER VACATION.

Memoir and journal of travel.

## SECOND YEAR.

1. *Mining Engineering.* Mechanics, Mining Engineering, Quantitative Analysis, Metallurgy, Geology, Mineralogy, Mathematical Physics, Conservation of Forces, Conservation of Sciences, Drawing.

2. *Metallurgy.* Quantitative Analysis, Metallurgy, Geology, Mineralogy, Conservation of Forces, Conservation of Sciences, Drawing.

3. *Geology and Natural History.* The same as Metallurgy.

4. *Analytical and Applied Chemistry.* Quantitative Analysis, Metallurgy, Geology, Applied Chemistry, Conservation of Forces, Conservation of Sciences.

## SUMMER VACATION.

Memoir and journal of travel.

## THIRD YEAR.

1. *Mining Engineering.* Mining Engineering, Assaying, Econ. Geology, Metallurgy, Quantitative Analysis, Blowpipe Anal. Quant., Drawing, Project.

2. *Metallurgy.* Assaying, Econ. Geology, Metallurgy, Quantitative Analysis, Blowpipe Anal. Quant., Drawing, Lithology, Project.

3. *Geology and Natural History.* Geology (Econ.), Drawing, Lithology, Palæontology, Dissertation.

4. *Analytical and Applied Chemistry.* Assaying, Geology, (Econ.), Metallurgy, Quantitative Analysis, Drawing, Applied Chemistry, Dissertation.

## REQUIREMENTS FOR ADMISSION.

Students who wish to enter the first year of the school, must be not less than eighteen years of age. They must pass a satisfactory examination in Algebra, Geometry, and Plane, Analytical and Spherical Trigonometry, Physics, and General Chemistry.

Graduates and students of colleges, who shall have completed so much of the course of study as shall be equivalent to the requirements for admission to the school, may be admitted to the first year class without examination, on presenting their diplomas or certificates of good standing and honorable dismissal.

Candidates for advanced standing are examined in all the studies previously pursued by the classes which they propose to enter.

Those who are not candidates for a degree may, by special arrange-

ment, pursue any of the branches taught in the school, without previous examination.

#### DEGREES.

The Degree of Engineer of Mines, or Bachelor of Philosophy, will be conferred on those students who pass satisfactory examinations. Certificates of proficiency will be given to those who pass a satisfactory examination in any one branch.

Candidates for the degree must be graduates of the school, and will be required to pass a special examination.

#### EXPENSES.

The fee for the full course is two hundred dollars per annum.

Those who wish to devote the whole of their time to Chemistry and Assaying, are charged two hundred dollars per annum for use of the Laboratory. These fees are payable, one-half on the first day of each session.

Special students in Assaying are admitted for two months for a fee of fifty dollars.

The fees for single courses of lectures vary from ten to thirty dollars.

A charge of five dollars is made for the diploma.

Apparatus may be purchased of any of the dealers in the city, or it may be borrowed from the supplies of the school. In the latter case, the student will be required to make a deposit of twenty dollars. At the end of each session, he will be credited with those articles which he returns in good order, while the value of those which he has injured or broken will be deducted from the deposit.

Platinum crucibles, weights, agate mortars, steel mortars, etc., must be paid for on delivery. When they are returned, a deduction will be made for the amount deposited, according to the injury they may have suffered in use. No charge is made for the ordinary chemicals.

#### PREPARATORY YEAR.

*First Session.* Geometry, Physics, Inorganic Chemistry, French, German, Drawing.

*Second Session.* Algebra and Trigonometry, Physics, Organic Chemistry, French, German and Drawing.

Candidates for the preparatory year must be seventeen years of age, and must pass a satisfactory examination in Arithmetic, including

the Metric System of Weights, Measures and Moneys; in Algebra, through simple equations; and in Geometry, on the first four books of Davies' Legendre.

*Scientific Apparatus and Collections.*

The students of the School of Mines have the benefit of the extensive and valuable collections of apparatus in the academic department, embracing all the branches of Mechanics and Physics; and also of the laboratory of general chemistry and collections in mineralogy and geology belonging to the College, and distinct from those of the School of Mines. The collections especially belonging to the school are as follows:

*Cabinets.*

Collections of specimens and models illustrating all the subjects taught in the school, are accessible to the students, including—

Physical Apparatus.

Chemical Apparatus and Specimens.

Crystal Models.

Natural Crystals, Pseudomorphs.

Pres. and Metallurgical Products.

Models of Furnaces.

Collections illustrating Applied Chemistry, Fossils.

Economic Minerals.

Rocks.

Olivier's Models of Descriptive Geometry.

Models of Mining Machines.

Models of Mining Tools.

*Crystal Models.*

The lectures on Crystallography are illustrated by a collection of 150 models in glass, which show the axes of the crystals, and the relation of the derived to the primitive form. This suite is completed by 350 models in wood, showing most of the actual and theoretical forms.

*Minerals.*

The cabinet of minerals comprises about 10,000 specimens arranged in table cases. It includes a large suite of pseudomorphs, and a collection illustrating Crystallography by natural crystals, showing both their normal and distorted form. The minerals are accompanied by

a large collection of models in wood, showing the crystalline form of each. Arranged in wall cases are large specimens, showing the association of the minerals.

The greater part of this valuable collection was presented to the school by Gouverneur Kemble and R. P. Parrott of Cold Spring, N. Y., and G. T. Strong, W. H. Aspinwall, Morris K. Jessup, D. S. Egleston, John Caswell, W. E. Dodge, Jr., Charles Lanier and J. Creaver of this city.

#### *Ores and Metallurgical Products.*

A very complete collection of Metallurgical Products, illustrating the different stages of the type process in use in the extraction of each metal in this country and Europe, is accessible to the students. This collection is constantly increasing.

Most of the specimens have been analyzed and assayed.

#### *Models of Furnaces.*

An extensive collection of models of furnaces has been imported from Europe. A very large number of working drawings of furnaces and machines, used in the different processes, are always accessible to the students.

#### *Collection Illustrating Applied Chemistry.*

Several thousand specimens of materials and products illustrating Applied Chemistry, have already been collected. These are now contained in cases and drawers, and are available for use at the lectures. It is designed, as soon as practicable, to arrange a cabinet of industrial chemistry, where these specimens will be exhibited under glass, so that they may be always exposed for inspection, as is now the case with the geological and mineralogical collections.

#### *Geological Collection.*

This consists of over sixty thousand specimens, forming the following groups :

1st. A systematic series of the rocks and fossils characteristic of each geological epoch, numbering over twenty thousand specimens.

2d. A collection of ores, coals, oils, clays, building materials, and other useful minerals, illustrative of the course of lectures on Economic Geology, and believed to give the fullest representation of our mineral resources of any collection yet made.

3d. A collection of five thousand specimens of rocks, and the minerals which form rocks, to illustrate the lecture on Lithology.

4th. A Palæontological series, which includes collections of recent and fossil vertebrates, articulates, mollusks, radiates and plants. In this series is to be found the largest collection of fossil plants in the world, including many remarkably large and fine specimens, and over two hundred new species of which representatives are not known to exist elsewhere.

Also the most extensive series of fossil fishes in the country, including, among many new and remarkable forms, the only specimen known of the Gigantic *Dinichthys*; a suite of Ward's casts of extinct saurians and mammals; a fine skeleton of the great Irish Elk, etc., etc.

#### *Models of Descriptive Geometry and Machines.*

The Olivier models, forming all mathematical surfaces by silk threads, and admitting of a variety of transformations; also other models illustrating general and special problems of Descriptive Geometry, shades and shadows, and stone-cutting drawings of machines and parts of machines for studying and copying; also landscapes, in crayons and in water color, for instruction in sketching; models of mining machines and mining tools, stationary steam engines, single and double cylinders, sections of steam cylinders, water-wheels, turbines, shaking tables, stamps, crushers, blowing machines, pumps, etc.

### LAW SCHOOL.

1. *Course of Instruction.* The regular and systematic instruction of the Law students upon the various topics of legal science is under the control of Professor Dwight. The plan of instruction combines the study of selected text-books with lectures.

The student is expected to prepare himself each day upon a topic assigned by the professor. He is then examined upon the subject studied. Having grappled with some of its difficulties, he is prepared for the full oral exposition by the Professor, which accompanies the examination. He is encouraged at the same time to ask questions concerning any difficulties which may have been suggested to him. Written lectures are also given, in which the principles of law are succinctly stated, and leading authorities are cited for further information. Experience has shown the value and effectiveness of this system. The mind of the student having been actively engaged

in study, his attention is aroused, and he is prepared to pursue with eagerness such avenues of legal knowledge as may be opened to him. It is believed that most of the young men who commence the study of law in this country, need the discipline and training which a thorough and systematic course of drill and daily examination may furnish them. It is also to be noticed that this method of instruction is very acceptable to the student, as shown by the fact that nearly all the members of the Senior Class voluntarily attend the drill exercises of the Junior Class, thus hearing the questions, answers and expositions for a second time, to their great and manifest advantage. The instruction in the other departments consists mainly in lectures with references to approved text-books and authorities.

2. *Courses of Lectures.* Courses of lectures are delivered by Professor Dwight upon Constitutional Law, Criminal Law, and as supplementary to the regular course of instruction upon the various topics of Municipal Law. Professor Lieber delivered courses of lectures upon the State, embracing the origin, development, objects and history of political society, on the laws and usages of war, on the history of political literature, on political ethics, on punishment, including statistics, etc., etc. Professor Nairne delivers a course of lectures upon the Ethics of Jurisprudence. Professor Ordonaux gives a course of lectures on Medical Jurisprudence. Occasional lectures are also delivered by prominent members of the New York Bar. By the courtesy of the Faculty of the Medical Department, the Law Students may attend any or all of the courses of the medical lectures free of charge.

3. *Moot Courts.* Two moot courts are held every week, at each of which a case previously assigned is argued by six or eight students selected from the two classes. The counsel respectively prepare written points, in the manner usual among lawyers, supporting their position by citing legal authorities. The court consists of the presiding Professor and the members of the Senior Class who had acted as counsel in the case previously argued. The associate judges deliver written opinions one week after the argument, and the case is concluded by an opinion given by the Professor.

4. *Annual Term and Hours of Attendance.* The term commences on the first Wednesday in October and continues until May 15th. The course of study embraces two years. The first year is given to general commentaries upon Municipal Law, the Law of Contracts and Real Estate. The second year is devoted to Equity, Jurisprudence,



Commercial and Admiralty Law, Evidence, Pleadings, Practice, and a review of the studies of the entire course. Particular attention is given to the law of real estate.

The hours of attendance in the department of Municipal Law are at 9½ A. M., 11 A. M., 3 and 4½ P. M. The other lectures do not exceed three per week, and the hours are announced as occasion may require.

5. *Library.* The Library contains a complete series of the reports and statutes of the United States, and of the reports of the State of New York, with the most valuable of those of the other States, a full series of English Common Law Reports from the Year Books to the present time, and standard treatises on English and American Law. It also includes many valuable treatises on the Roman Law. It is open for the use of the students during the term, from 9 A. M. to 10 P. M. The students of the Law School also have access to the Astor Library (in the immediate vicinity of the Law School), which contains a very extensive series of English and American reports, with other valuable works on American and Foreign Law.

6. *Prizes.* There are four money prizes awarded at the annual commencement to the members of the Graduating Class in regular attendance during the entire course. Three of these prizes are awarded in the department of municipal law. The examination for the prizes is conducted by means of essays upon a selected subject, and by written answers to printed questions. The first of these prizes is \$250, the second \$150, and the third \$100. In the department of political science, there is a prize of \$200. The examination consists of essays, and of written answers to printed questions.

7. *Graduation and Admission to the Bar.* An examination for graduation is held at the close of the Senior year before the Professor of the Law School and the Law Committee of the College, occupying three days, and extending over the topics of municipal law embraced within the studies of the course.

The Degree of Bachelor of Laws is conferred upon such students as shall have pursued, to the satisfaction of the Law Committee and Professor of Municipal Law, the entire course of study, and shall have passed the requisite examination.

By chapter 202 of the Laws of 1860, the Graduates of the Law School are entitled to admission to practice law in all the courts of the State, without further examination. It is expressly provided in chapter 486 of the Laws of 1871, which authorizes the Court of



Appeals, in general, to make rules for the admission of Law Students to the Bar, that its provisions shall not affect chapter 202 of the Laws of 1860. The Graduates are, therefore, still entitled to admission to the Bar without complying with the provisions of the act of 1871, or with the rules of the Court of Appeals based upon it.

8. *Terms of Admission, Fees, etc.* The students are divided into two classes, Senior and Junior. Any person of good moral character, whether a Graduate of any literary College or not, may be admitted to either of the classes. Nearly all of the students pursue the entire course.

The tuition fees are \$100 per year, payable in advance, admitting the student to all the lectures. The fee for the diploma is \$5.

9. *The Number of Students, Catalogues, etc.* The number of students during the year was two hundred and ninety-one (291), of whom 124 were in the Senior, and 167 were in the Junior Class. The Graduating Class numbered 99.

The Law School is now (1872) in the fourteenth year of its existence; the following table exhibits its numbers since its organization :

	Seniors.	Juniors.	Total.
1858-59 .....	35	..	35
1859-60 .....	35	28	63
1860-61 .....	42	61	103
1861-62 .....	38	79	117
1862-63 .....	56	90	146
1863-64 .....	72	99	171
1864-65 .....	93	77	170
1865-66 .....	61	119	180
1866-67 .....	92	78	170
1867-68 .....	76	109	185
1868-69 .....	97	101	198
1869-70 . . . . .	95	135	230
1870-71 .....	119	124	243
1871-72 .....	124	167	291

Of the present number, 124 are Graduates of 36 different literary Colleges.

A separate catalogue of the Law School is published annually.

The foregoing report was adopted at a regular meeting of the Trustees held on the second day of December, in the year of our

Lord one thousand eight hundred and seventy-two; and it was ordered that the seal of the College be affixed to the same; that it be signed by the Chairman, Treasurer and Clerk, and transmitted to the Regents of the University.

[L. s.]

BENJ. I. HAIGHT, *Chairman.*

G. M. OGDEN, *Treasurer.*

WILLIAM BETTS, *Clerk.*

[Assembly No. 28.]

3

## II. UNION COLLEGE, SCHENECTADY.

*To the Regents of the University of the State of New York :*

The Trustees of Union College, in compliance with a requisition of the Regents of the University, submit the following report for the last collegiate year, ending May 31, 1872, containing a just and true statement of facts, showing the progress and condition of said College during and at the close of said year, in respect to the several subject-matters following, viz. :

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in said College, during said year, as established by the said Trustees, were the following :

- A Professorship of Moral Philosophy.
- A Professorship of Ancient and Oriental Languages.
- A Professorship of Mathematics.
- A Professorship of Natural Philosophy.
- A Professorship of Natural History.
- A Professorship of the Latin Language and Literature.
- A Professorship of Modern Languages and Literature.
- A Professorship of Analytical Chemistry.
- A Professorship of Logic, Rhetoric and English Literature.
- A Professorship of Mental Philosophy.
- A Professorship of the Greek Language and Literature.
- A Professorship of Civil Engineering and Mathematics.

### 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The following is a list of the Trustees of the College, with their respective places of residence :

#### *Trustees.*

- |   |                      |
|---|----------------------|
| His Excel'cy John T. Hoffman, LL. D., Gov., Albany. | } <i>Ex officio.</i> |
| Hon. Allen C. Beach, Lieut.-Gov., Watertown.        |                      |
| Hon. G. Hilton Scribner, Sec'y of State, Yonkers.   |                      |
| Hon. Nelson K. Hopkins, Comptroller, Buffalo.       |                      |
| Hon. Thomas Raines, Treasurer, Rochester.           |                      |
| Hon. Francis C. Barlow, Attorney-Gen., New York.    |                      |
| James Brown, Esq., New York.                        |                      |

Hon. Ira Harris, LL. D., Albany.

Hon. William W. Campbell, LL. D., Cherry Valley.

Hon. Richard M. Blatchford, LL. D., New York.

Rev. Ebenezer Halley, D. D., Albany.

Hon. David H. Little, Rochester.

Rev. J. Trumbull Backus, D. D., Schenectady.

Hon. Clarkson N. Potter, New York,

Hon. Platt Potter, LL. D., Schenectady.

Hon. Charles C. Nott, New York.

William Tracy, LL. D., New York.

Hon. William F. Allen, LL. D., Albany.

Rev. E. Nott Potter, D. D., Schenectady.

Joseph W. Fuller, Esq., Troy.

Charles E. Smith, Esq., Albany, term of office expires June 26, 1876.

Harvey J. King, Esq., Troy, term of office expires June 26, 1873.

John A. De Remer, Esq., Schenectady, term of office expires June 26, 1874.

Silas B. Brownell, Esq., New York, term of office expires June 26, 1875.

*Visitors of the Nott Trust Fund.*

Urania E. Nott, Schenectady.

Rev. John Nott, D. D., Fonda.

Hon. William W. Campbell, LL. D., Cherry Valley.

Hon. Richard M. Blatchford, LL. D., New York.

Rev. J. Trumbull Backus, D. D., Schenectady.

Rev. A. C. Vermilye, D. D., Schenectady.

The Faculty of said College, including all persons charged with the duty of giving instruction therein during said year, consisted of:

*Faculty.*

Rev. Eliphalet Nott Potter, D. D., President, Professor of Moral Philosophy, and Lecturer upon the Evidences of Christianity.

Taylor Lewis, LL. D., L. H. D., *Nott*-Professor (No. 6) of the Ancient and Oriental Languages.

Isaac W. Jackson, LL. D., *Nott*-Professor (No. 3) of Mathematics.

John Foster, A. M., *Nott*-Professor (No. 8) of Natural Philosophy.

Jonathan Pearson, A. M., Professor of Natural History.

Benjamin Stanton, A. M., *Nott*-Professor (No. 7) of the Latin Language and Literature.

William Wells, A. M., Professor of Modern Languages and Literature.

Maurice Perkins, A. M., M. D., *Nott*-Professor (No. 3) of Analytical Chemistry; and Curator of the Museum.

Rev. Ransom Bethune Welch, D. D., LL. D., *Nott*-Professor (No. 5) of Logic, Rhetoric and English Literature; and Acting Professor of Mental Philosophy.

Henry Whitehorne, A. M., *Nott*-Professor (No. 1) of the Greek Language and Literature.

Cady Staley, A. M., C. E., Professor of Civil Engineering.

Harrison Edwin Webster, A. M., Assistant Professor of Natural History.

Egbert Charles Lawrence, A. B., Tutor in Mathematics.

Samuel Burnett Howe, A. M., *Nott* (adjunct) Professor (No. 4); Principal of the Classical Department of Schenectady Union School.

Albert Dart Peake, A. B., Assistant Teacher in the Classical Department of Schenectady Union School.

Jonathan Pearson, A. M., Treasurer and Librarian.

Edgar Marshall Jenkins, Assistant Treasurer and Registrar.

The other officers and servants of said College, charged with duties therein other than those above written, were a Superintendent of the College garden, farmer, teamster, two janitors, and three men of all work.

### 3. NUMBER OF STUDENTS.

The whole number of Students, Undergraduates in said College, during said year, was 89; remaining at the close of the year May 31, 1872, 80; number of Graduates at the annual commencement June 28, 1871, A. B., 24; C. E., 6.

The whole number of Graduates of the College from 1797 to 1871, inclusive, A. B., 4,223; C. E., 100.

### 4. CLASSIFICATION OF STUDENTS.

The Students who were Undergraduates in said College during said year were classified as follows, viz.:

Seniors .....	14
Juniors .....	20
Sophomores .....	25
Freshmen .....	20
Students in Civil Engineering .....	9
Student in Analytical Chemistry .....	1
	<hr/>
	89
	<hr/>

## 5. COMMENCEMENT EXERCISES.

UNION COLLEGE,  
SEVENTY-FIFTH COMMENCEMENT,  
*June 28th, 1871.*

## ORDER OF EXERCISES.

MUSIC BY.....DORING'S BAND.

MUSIC.

*Prayer.*

MUSIC.

1. Latin Salutatory Oration.....George R. Donnan, Galway.
2. The Dependence of the Mental on the Material.....Giles P. Hawley, Potsdam.
3. Monumenta.....Thomas R. Featherstonhaugh, Schenectady.
4. Character the Measure of a Man's Ability.....Joseph C. Hostetler, Decatur, Ill.
5. Philosophy in Politics.....Charles T. Haviland, Waterville, Me.
6. The Genius of Bunyan .....William S. Miller, Mechanicville.
7. Theology and Science.....Percival J. Parris, Paris, Me.
8. Political Intolerance... ..George R. Donnan, Galway.
9. Intellectual Discipline in our Colleges.....Herbert S. Wilbur, Lowville.
10. The Fountain of Perpetual Youth.....Philo W. Sprague, Schenectady.
11. The True Statesman.....Preston King, Hammonton, N. J.
12. Charles Dickens.....Frank Wallach, New York.
13. Civil Government.....William W. Jenks, Owego.
14. The Influence and Responsibility of Literary Men,  
George W. Featherstonhaugh, Schenectady.
15. Sure Foundations.....Charles E. Hollenback, Owego.
16. An Inconsistency.....John V. R. Hoff, Albany.
17. Our National Necessities.....Emmet T. Waterman, Lisha's Kill.
18. A National Literature.....David S. Baker, Mechanicville.
19. The Power of Man in Conflict with Fate.....Gabriel Wisner, Elmira.
20. Can Eloquence Decay?.....William H. Matthews, Jr., Fort Edward.
21. The True Ideal of Education.....Mr. William H. Clark, Lyons.

(A candidate for the degree of Master of Arts.)

MUSIC.

*Degrees Conferred.*

MUSIC.

117TH PSALM.....*Old Hundred.*

From all that dwell below the skies,  
Let the Creator's praise arise;  
Let the Redeemer's name be sung,  
Through every land by every tongue.

Eternal are thy mercies, Lord;  
Eternal truth attends thy word;  
Thy praise shall sound from shore to shore,  
Till suns shall rise and set no more.

## PRIZES AWARDED.

1. The Ingham Prize.
2. Prize Essays in English Literature.
3. The Warner Prize.
4. Blatchford Oratorical Medals.
5. Prize Speaking.
6. Junior Prizes in Natural Philosophy.
7. Sophomore Prizes in Ancient Languages.

## MUSIC.

*Prayer and Benediction.*

## CANDIDATES FOR DEGREES.

*Bachelors of Arts.*

GEORGE R. DONNAN.	PHILO W. SPRAGUE.
GEORGE W. FEATHERSTONHAUGH.	GABRIEL WISNER.
JOHN V. R. HOFF.	WILLIAM W. JENKS.
ASA L. ROGERS.	DAVID S. BAKER.
WILLIAM H. MATTHEWS, Jr.	JOSEPH C. HOSTETLER.
CHARLES T. HAVILAND.	PERCIVAL J. PARRIS.
GILES P. HAWLEY.	WILLIAM S. MILLER.
HERBERT S. WILBUR.	CHARLES E. HOLLENBACK.
FRANK WALLACK.	CHAUNCEY YATES.
PRESTON KING.	ERNEST A. CORBIN.
EMMET T. WATERMAN.	WILLIAM H. LAMBERT.
THOMAS R. FEATHERSTONHAUGH.	CLARK B. GILLETTE.

*Civil Engineers.*

ALMON G. BARDIN.	PRESTON KING.
WILLIAM D. BULLOCK.	ASA L. ROGERS.
STANISLAUS P. FRANCHOT.	JOSEPH SHERMAN, Jr., A. B.

*A. M. in Course.*

PHILO G. VALENTINE.	WILLIAM H. SNYDER.
ZAREMBA W. WALDRON.	JAMES H. ROBINSON.
EDWARD L. PARRIS.	JOHN E. SHARPE.
COLUMBUS CORNFORTH.	WILLIAM H. CLARK.
AUGUSTUS E. CURTIS.	MELVILLE D. LANDON.
DAVID SPRAKER, JR.	WILLIAM L. PEARSON.
HARRISON E. WEBSTER.	JOHN E. BARRINGER.
MORRIS J. FRANKLIN.	BENJAMIN A. WILLIS.
HENRY REED RATHBONE.	GEORGE R. FAIRBANKS.

*A. B.*

JOHN NOETLING.

*A. M.*ALBERT T. CHESTER.  
ASHBEL K. SHEPARD.

JOHN A. OSBORN.

*Ph. D.*

DANIEL B. HAGAR.

*D. D.*Rev. EDMUND H. SEARS.  
Rev. CHARLES N. WALDRON.  
Rev. CHARLES H. TAYLOR.Rev. GEORGE H. WALSH.  
Rev. WILLIAM C. ROBERTS.  
Rev. WILLIAM S. SMART.*L.L. D.*

Hon. SIDNEY BREESE.

## Exercises.

Analytical Geometry.....	48
Physiology .....	36

*Junior Class.*

Cicero—Tusculan Disputations .....	60
Æschylus—Two Dramas.....	60
Mechanical “Work,” Hydrostatics, etc .....	60
Rhetoric.....	78
Logic .....	30
German Epic and Tragedy.....	183
Descriptive Geometry .....	45
Lucretius .....	36
Plato—Phædon .....	48
Heat, Steam Engine, Electricity, etc.....	48
Mensuration .....	30
Calculus .....	60
Acoustics, Magnetism, Galvanism, etc .....	48
Chemistry .....	48
Political Economy .....	36
History of Civilization.....	36
Analytical Mechanics .....	36
Leveling.....	..

*Senior Class.*

Optics.....	60
Mental Philosophy.....	60
Lectures on Greek Philosophy.....	30
Lectures on English Prose Literature.....	30
Applied Chemistry .....	60
Astronomy .....	48
Geology and Mineralogy.....	60
Moral Philosophy .....	60
Lectures on Greek Philosophy and Literature.....	36
International Law .....	48
Lectures on English Poetry .....	36
Physical Geography and Meteorology .....	36
Biblical Literature .....	24
Lectures on Greek Poetry .....	36
Civil Engineering.....	60
Engineering Statics .....	81
Roads and Railroads .....	75



## 8. EXERCISES.

Throughout the Sophomore year, Junior and Senior years, exercises in English Composition and Declamation are required.

## 9. EXHIBITIONS AND PRIZE CONTESTS.

1. *The Blatchford Oratorical Medals*.—Hon. R. M. Blatchford, LL. D., has founded an Oratorical Prize, consisting of two Gold Medals, of the value of the interest of \$1,000, to be given to the two members of the graduating class who shall deliver at Commencement the best Orations; “regard being had alike to their elevated and classical character, and to their graceful and effective delivery.” These medals, of the values of forty and thirty dollars for the orations respectively first and second in merit, are awarded, at the close of the exercises, by a committee appointed for the purpose. Awarded to, first medal, J. S. V. R. Hoff of Albany; second medal, Percival J. Parris, Paris, Me.

2. *The Warner Prize*. Hon. H. G. Warner, LL. D., of Rochester, has founded an annual prize, consisting of silver plate of the value of \$50, to be awarded to “the Graduate of Union College Classical Course who shall reach the highest standing in the performance of collegiate duties, and also sustain the best character for moral rectitude and deportment, without regard to religious practice or profession. The prize awarded by the officers of the College, in accordance with the conditions prescribed by the donor, is presented at Commencement. Awarded to George R. Donnan, Galway.

3. *The Ingham Prize*. Hon. Albert C. Ingham, LL. D., of Meridian, N. Y., for the purpose of promoting a familiarity with the best English classics, has founded an annual prize of seventy dollars (in the form of plate, or money, as preferred), to be awarded to that member of the Senior Class (connected with the College for not less than two years) who shall present the best essay on one of two subjects previously assigned in English Literature or History. This prize is awarded at Commencement by a Committee appointed in accordance with certain conditions prescribed by the founder. Awarded to J. S. V. R. Hoff of Albany.

4. *Prize Essays*. Prizes are awarded to the two members of the Senior Class who present the best essays on English Literature, on subjects assigned the previous term. First prize, awarded to George R. Donnan of Galway; second prize, awarded to Philo W. Sprague of Schenectady.

5. *Prize Speaking.* Prizes are awarded to the two members of the Junior and Sophomore Classes, respectively, who deliver the best orations on the occasion of prize speaking during Commencement week. Six Juniors and four Sophomores are selected for this exercise, regard being had both to composition and to delivery. The prizes are in the form of valuable books, and are announced at Commencement. Juniors, first prize, awarded to C. Henri Leonard, Chagrin Falls, Ohio; second prize, awarded to W. J. Hillis, West Milton. Sophomores, first prize, awarded to Eugene L. Mapes, Florida, Orange county; second prize, awarded to Henry A. Powell of Brooklyn.

*Special Prizes.* Junior prizes in Natural Philosophy, the first prize of twenty dollars, awarded to Byron Horton of Liberty Falls; the second prize of ten dollars, awarded to William J. Kline of Fultonville.

*Sophomore Prizes in Ancient Languages.* First prize of thirty dollars, awarded to Henry O. Hill of Byfield, Mass.; the second prize of ten dollars, awarded to Eugene L. Mapes of Florida, Orange county.

## 10. EXAMINATIONS.

Examinations for entrance are held on the last two days (Friday and Saturday) of the week preceding Commencement, and the last two days (Monday and Tuesday) of each vacation. The published requirements are adhered to, and scholars are refused admission unless their deficiencies are of so slight a character as not to interfere with their progress with the classes, and can easily be made up within the first session after entrance.

The number of public examinations for entrance during the year were two, of two days each.

The examinations of the classes were held at the close of each session, and continued three days, about two days being devoted to each class, on all the subjects of study pursued by them subsequent to the last previous examination.

The influence of examinations on the standing of the student in his class, and on his graduation, is equal to that of five recitations.

## 11. MODE OF INSTRUCTION.

The general mode of instruction is by analysis, and recitations from text-books, when possible. The subjects taught solely by lec-

tures, were Greek Philosophy, Poetry and Literature by Professor Lewis, and English Literature and Poetry by Professor Welch.

Other professors lectured occasionally on subjects connected with their daily recitations.

In all cases, the student was required to write out each lecture as fully as might be, and submit his book for examination to the Professor.

Students are required to attend at least three recitations or lectures each day, except Saturdays; in some cases they attend five or six.

## 12. DISCIPLINE.

The discipline of the College is administered by the President.

The standing of each student, both as it respects scholarship, deportment and attendance, is reported, at least once each session, to his parent or guardian, and is recorded by the registrar. The standing of students is determined by daily marks.

## 13. GRATUITOUS AID.

The income of \$50,000 is devoted to the assistance of indigent students. All needy young men have their College bills remitted wholly or in part as the case requires. Twenty-three students have been assisted from this fund during the past year.

## 14. STATUTES OR BY-LAWS OF THE COLLEGE.

A copy is transmitted with this report.

## 15. DESCRIPTION AND VALUE OF BUILDINGS, ETC.

The following College buildings, lands and movable property are not included in the Treasurer's accounts:

Two students' dormitories, 200 feet long, each containing forty-eight rooms.

Two buildings for lecture and recitation rooms, laboratory, apparatus rooms, etc.

Two buildings for recitation rooms and engineering apparatus, etc.

A central building or rotunda now in process of erection, intended for a chapel, alumni hall, etc.

Twelve houses for President and Professors.

Four houses for janitors and servants.

These buildings are estimated to be worth, exclusive of sites, at least .....	\$194,000 00
Adjacent to the College buildings there are 221 acres of land, constituting the <i>site</i> and not included in the Treasurer's accounts, valued at .....	130,000 00
The library contains about 12,000 volumes, valued at..	12,000 00
The Chemical and Philosophical Apparatus, including the Engineering Apparatus, is worth.....	15,000 00
The Cabinet of Minerals, Shells and other specimens is valued at .....	25,000 00
• Farming tools, horses, carts, stoves and furniture of public rooms .....	5,000 00
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Total value of property not included in Treasurer's books .....	\$381,000 00
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16. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

<i>Assets*.</i>	
Cash on hand .....	\$2,290 01
Bonds and mortgages.....	121,761 30
Permanent leases ....	7,663 48
Certificates of Trust (Hunter's Point).....	22,000 00
Bills receivable.....	1,326 54
Bank stocks.....	1,350 00
Real estate, for sale .....	46,443 42
Hunter's Point Trust.....	92 36
Sundry accounts, students and others.....	7,509 13
<hr/>	
	\$210,436 24
<hr/> <hr/>	

<i>Funds and Liabilities.</i>	
President and Professors' Fund.....	\$78,483 93
Indigent Students' Fund.....	50,000 00
Warner Prize Fund.....	714 28
Blatchford Prize Fund.....	1,000 00
Nott Trust Fund .....	7,204 45
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Carried forward.....	\$137,402 66

\* NOTE.—The College buildings, with the Library and other property contained in them, and the grounds constituting the site, and not disposable, have no fixed pecuniary value attached to them in this set of accounts.

# UNION COLLEGE.

45

Brought forward.....	\$137,402 66
Taylor and Lowber Contract .....	33,044 60
Bills payable (Ingham Prize Fund).....	1,000 00
Sundry accounts .....	2,168 34
Net capital .....	36,820 64
	<hr/>
	\$210,436 24
	<hr/> <hr/>

## 17. DEBTS.

None.

## 18. REVENUE.

### *Income.*

Interest and dividends.....	\$8,221 63
Real estate, rents .....	71 90
Tuition.....	3,935 00
Profit and loss (cash) .....	90 00
Graduates, old bills paid.....	72 00
Diplomas .....	107 00
Buildings .....	245 44
General expenses .....	76 98
	<hr/>
	\$12,819 95
Net loss .....	6,678 62
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	\$19,498 57
	<hr/> <hr/>

### *Expenditures.*

Paid to account of

Instruction; salaries .....	\$9,750 00
Students—suspended accounts.....	451 38
Treasury Office; salaries, stationery, etc .....	2,469 25
College garden .....	350 00
Incidentals.....	192 20
Analytical Laboratory.....	514 75
Warner Prize.....	50 00
Union School Scholarships .....	240 00
Taxes .....	448 50
Printing.....	556 26
Insurance.....	651 85
Library.....	47 50
Indigent Students.....	1,669 50
	<hr/>
Carried forward .....	\$17,391 19

Brought forward.....	\$17,391 19
Ingham Prize .....	70 00
Law expenses.....	900 00
Apparatus .....	366 05
Site.....	628 52
Blatchford Prizes .....	70 00
Natural History Department.....	72 81
	<hr/>
	\$19,498 57
	<hr/> <hr/>

## NOTT TRUST FUND.

*Assets.*

Cash on hand.....	\$3,900 79
Residue certificates.....	7,000 00
Real estate—Hunter's Point.....	655,415 58
Union College.....	7,204 45
Bonds and mortgages .....	135,587 50
Hunter's Point Trust.....	8,014 99
Personal accounts.....	335 50
Bank stocks.....	500 00
	<hr/>
	\$817,958 81
	<hr/> <hr/>

*Debts and Liabilities.*

Obligations payable .....	\$100,000 00
Net capital.....	717,958 81
	<hr/>
	\$817,958 81
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*Income.*

Interest and rents.....	\$15,890 57
Profit and loss.....	60 00
Net loss .....	1,339 18
	<hr/>
	\$17,289 75
	<hr/> <hr/>

*Expenditures.*

Paid to account of	
Incidentals.....	\$14 75
Professors .....	16,695 00
Prize Scholars.....	80 00
Visitors .....	500 00
	<hr/>
	\$17,289 75
	<hr/> <hr/>

## 20. TABULAR STATEMENT.

*Courses of Study, Classical, Scientific, Engineering.*

Number of Professors.....	12
“ Tutors .....	2
“ College students.....	89
“ Graduates, A. B.....	24
“ “ C. E .....	6
Whole number of graduates A. B.....	4,228
“ “ C. E.....	100
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Value of College buildings and grounds.....	\$324,000 00
“ apparatus and library, etc.....	57,000 00
Revenue.....	28,770 52
Expenditures.....	36,788 32
Debts .....	100,000 00
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## 21. PRICE OF TUITION.

Tuition for the session.....	\$15 00
“ year.....	45 00
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*Annual Expenses.*

College bills and board.....	\$220 to \$310
Room rent in College .....	9 to 9
Servants' hire, fuel for public rooms, etc.....	7 to 7
Fuel and lights.....	20 to 25
Washing .....	10 to 15
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\$266 to \$366	
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## 22. CLOSE OF REPORT.

This report is submitted in accordance with a resolution of the Board of Trustees of Union College, passed July 27, 1859, directing that the Finance Committee be authorized to prepare the Annual

## III. HAMILTON COLLEGE, CLINTON, ONEIDA COUNTY.

*To the Regents of the University of the State of New York:*

The Trustees of Hamilton College, in accordance with the requirements of the Regents of the University of the State of New York, submit the following as their report of its condition and progress during the collegiate year ending June 27, 1872.

## 1. TRUSTEES, FACULTY AND OTHER OFFICERS.

*Trustees.**Elected.*

- 1828. John J. Knox, Esq., Knoxboro.
- 1836. Samuel B. Woolworth, LL. D., Albany.
- 1836. Hon. Henry A. Foster, LL. D., Oswego.
- 1839. Rev. Simeon North, D. D., LL. D., Clinton.
- 1844. Hon. Horatio Seymour, LL. D., L. H. D., Utica.
- 1847. Hon. Othniel S. Williams, LL. D., Clinton.
- 1847. Rev. Samuel H. Gridley, D. D., Waterloo.
- 1849. Hon. Edmund A. Wetmore, Utica.
- 1849. Rev. George S. Boardman, D. D., Little Falls.
- 1851. Rev. Philemon H. Fowler, D. D., Utica.
- 1852. Rev. William C. Wisner, D. D., Lockport.
- 1856. Hon. William J. Bacon, LL. D., Utica.
- 1863. William D. Walcott, Esq., New York Mills.
- 1864. Rev. A. Delos Gridley, Clinton.
- 1867. Rev. Samuel G. Brown, D. D., LL. D., Clinton.
- 1867. Charles C. Kingsley, Esq., Utica.
- 1869. Rev. L. Merrill Miller, D. D., Ogdensburgh.
- 1869. Publius V. Rogers, Esq., Utica.
- 1870. S. Stewart Ellsworth, Esq., Penn Yan.
- 1871. Rev. Henry Kendall, D. D., New York.
- 1871. Gilbert Mollison, Esq. Oswego.
- 1871. John N. Hungerford, Esq., Corning.
- 1872. Hon. Ellis H. Roberts, LL. D., Utica.
- 1872. Rev. Anson J. Upson, D. D., Albany.
- 1850. Hon. Othniel S. Williams, LL. D., Secretary and Treasurer.
- 1859. Rev. N. W. Goertner, D. D., Commissioner.



*Faculty.*

Rev. Samuel Gilman Brown, D. D., LL. D., President, and Walcott-Professor of the Evidences of Christianity. Elected November 7, 1866.

Charles Avery, LL. D., Professor Emeritus of Chemistry. Elected August 12, 1834.

Rev. Nicholas Westermann Goertner, D. D., College Pastor. Elected July 15, 1863.

Oren Root, LL. D., Professor of Mathematics, Mineralogy and Geology. Elected November 1, 1849.

Christian Henry Frederick Peters, Ph. D., Litchfield-Professor of Astronomy, and Director of the Litchfield Observatory. Elected July 20, 1858.

Ellicott Evans, LL. D., Maynard-Professor of Law, History, Civil Polity and Political Economy. Elected November 13, 1860.

Edward North, L. H. D., Edward Robinson-Professor of the Greek Language and Literature. Elected December 27, 1843.

Rev. John William Mears, D. D., Albert Barnes-Professor of Intellectual and Moral Philosophy. Elected July 19, 1871.

Albert Huntington Chester, A. M., E. M., Childs-Professor of Agricultural Chemistry. Elected December 21, 1870.

Rev. Abel Grosvenor Hopkins, A. M., Benjamin-and-Bates-Professor of the Latin Language and Literature. Elected August 29, 1869.

Chester Huntington, A. M., Professor of Natural Philosophy and Librarian. Elected July 20, 1870.

Samuel Darwin Wilcox, A. M., Kingsley-Professor of Logic, Rhetoric and Elocution, and Librarian. Elected July 20, 1870.

Henry Allyn Frink, A. B., Assistant Kingsley-Professor of Logic, Rhetoric and Elocution. Elected June 27, 1872.

2. NUMBER OF STUDENTS AND GRADUATES.

The whole number of Students was .....	175
Graduated June 27, 1872 .....	45
Whole number of Graduates .....	1,317

3. CLASSIFICATION OF STUDENTS.

Law Students .....	11
Seniors .....	40
Juniors .....	37

Sophomores .....	39
Freshman .....	48
	<hr/>
Total .....	175
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4. ACADEMIC DEGREES.

The names of those who received academic degrees at the last Commencement, June 27, 1872, are as follows :

*A. B. in Course.*—Robert Hurlburt Abbott, James Anderson, Nathan Lafayette Bachman, Frederick Eli Barrows, Asa Gardiner Benedict, Albert Lyndon Blair, Herman Carl George Brandt, Seward Mandeville Dodge, Daniel Gordon Dorrance, Jr., Henry French, Edward Winslow Geer, Charles Chapin Gridley, Walter Martin Hand, Edward Mayne Hart, John Hampden Hopkins, Arthur Stephen Hoyt, Edward Gurley Love, George Frederick Lyon, Samuel Glover Moore, William Perry Northrup, Anthony Peck, Jr., Walter Scott Peterson, John Egbert Phelps, Joseph Crowell Russ, John Henry Shepherd, Brainard Gardner Smith, Charles Henry Stanton, Cornelius Stanton Stowits, Melancthon Woolsey Stryker, Charles Hansen Toll, Morton Fitch Trippen, James Franklin Tufts, Arthur John Waugh, Lewis Russell Webber, Arthur Merrill Wright.

*A. B. Nunc Pro Tunc.*—Morris Fletcher Sheppard.

*LL. B. in Course.*—Charles Goddard Baldwin, James Levi Bennett, Arthur Wellington Bronson, Francis Marion Burdick, John William Church, Charles Holland Duell, Richard Allison Elmer, Israel John Gray, Charles Luke Stone, John Forbes Tuttle.

*A. M. in Course.*—Frederick Johnson Jackson, Leicester Jotham Sawyer, Lorenzo Smith Bosworth Sawyer, Charles Wesley Merritt, Joseph Leonard Waugh, William John Jones, Samuel Farwell Bagg, John Dykeman Conley, William Lee Downing, William Parsons Heston, Simon Newton Dexter North, Eliot Robinson Payson, William Henry Whiting, Edward James Wickson, Charles Augustus Wetmore.

*A. M. Honorary.*—Daniel Edwin Whitmore, Herman Clinton De Groat.

*D. D. Honorary.*—Rev. William Wallace Williams, Rev. Josiah Addison Priest, Rev. John Jones.

*LL. D. Honorary.*—Hon. Daniel Darwin Pratt, Hon. Elias Warner Leavenworth.

## 5. GRADUATING EXERCISES.

The following is a copy of the order of exercises at the sixtieth commencement, June 27, 1872:

## PROGRAMME.

*Prayer.*

## MUSIC.

1. Salutatory Oration in Latin. . . . . Herman G. C. Brandt.
2. Oration—The Legacy of Blunders. . . . . Robert H. Abbott.
3. Oration—The Limits of the Knowable. . . . . James Anderson.\*
4. Classical Oration—The Position of the Drama in Literature,

Asa G. Benedict.

## MUSIC.

5. Oration—"Nescit Reverti," . . . . . Nathan L. F. Bachman.
6. Oration—The Inconvenience of Friendship. . . . . Frederick E. Barrows.
7. Oration—Calvinism . . . . . Seward M. Dodge.
8. Historical Oration—Sham in Patriotism . . . . . Albert L. Blair.

## MUSIC.

9. Dissertation—The Mission of Floods. . . . . Daniel G. Dorrance, Jr.
10. Oration—The Fallibility of Critics . . . . . Henry French
11. Dissertation—Ancient and Modern Warfare . . . . . Edward W. Geer.
12. Philosophical Oration—Sir William Hamilton . . . . . Walter M. Hand.

## MUSIC.

13. Oration—Morse and the Telegraph. . . . . Charles C. Gridley.
14. Dissertation—The Mission of American Journalism. . . . . Edward M. Hart.
15. Oration—Blücher . . . . . George F. Lyon.
16. Rhetorical Oration—Faults of Pulpit Oratory. . . . . John H. Hopkins.

## MUSIC.

17. Oration—The Storm Signal Service . . . . . Samuel G. Moore.
18. Oration—Two Phases of Courage. . . . . William P. Northrup.
19. Oration—"I Told you So," . . . . . Anthony Peck, Jr.
20. Scientific Oration—Relation of Science to Christianity. . . . . Edward G. Love.

## MUSIC.

21. Oration—Imaginative Literature . . . . . Walter S. Peterson.
22. Dissertation—The Political Relations of England and the United States,  
John E. Phelps.
23. Oration—Strikes. . . . . Joseph C. Russ.
24. Literary Oration and Pruyn Medal Oration—The Obligation of the  
State to its Literary Men . . . . . Cornelius S. Stowits.

## MUSIC.

25. Head Prize Oration—The Position of Alexander Hamilton in  
American History . . . . . John H. Shepherd
26. Oration—A Word for Ourselves. . . . . Brainard G. Smith.
27. Oration—The Use of Satire. . . . . Charles H. Stanton.
28. Historical Oration—The Old and the New . . . . . Arthur J. Waugh.

\* Excused.

## MUSIC.

29. Oration—Dreaming .....Melancthon W. Stryker.  
 30. The Power of Minorities .....Charles H. Toll.  
 31. High Oration—Recklessness in American Character.....James F. Tufts.  
 32. Ethical Oration—The True Mission of the Anglo-Saxon Race,  
 Lewis R. Webber.

## MUSIC.

33. Valedictory Oration—The Influence of a Belief on Character..Arthur S. Hoyt.

*Prizes and Degrees Conferred.*

## BENEDICTION.

## 6. COLLEGIATE SESSIONS.

1. From the first Thursday in September, 14 weeks.
2. From the second Thursday in January, 12 weeks.
3. From the third Thursday in April to commencement.

*Calendar for 1871-2.*

1871. Sept. 14. Fall Term opened Thursday.  
 Nov. 7. State Election, Tuesday.  
 Nov. 30. Thanksgiving Day, Thursday.  
 Dec. 4. Examination begins Monday.  
 Dec. 6. Fall Term closed Wednesday.

## Vacation of four weeks.

1872. Jan. 4. Winter Term opened Thursday.  
 Jan. 5. Head Prize and Pruyn Medal Orations presented  
 Friday noon.  
 Jan. 25. Day of Prayer for Colleges, Thursday.  
 Feb. 22. State Holiday, Thursday.  
 Mar. 16. Curran Prize Examination, Saturday.  
 Mar. 19. Examination began Tuesday.  
 Mar. 27. Clark Prize Orations and Prize Essays presented  
 Wednesday noon.  
 Mar. 27. Junior Exhibition, Wednesday.

## Vacation of two weeks.

- April 11. Summer Term opened Thursday.  
 April 25. Graduating parts presented Thursday.  
 June 1. Underwood Prize Examination, Saturday.  
 June 3. Senior Examination began Monday.  
 June 5. Clark Prize Exhibition; Wednesday.  
 June 6. Honors announced, Thursday.  
 June 15. Tompkins Prize Examination, Saturday.

- June 18. Examination of Lower Classes began Tuesday.  
 June 21. Prizes announced, Friday.  
 June 23. President's Baccalaureate Sermon, Sunday.  
 June 23. Address before Society of Christian Research, Sunday.  
 June 24. Entrance Examination, Monday forenoon.  
 June 24. Kingsley Prize Debate, Monday afternoon.  
 June 24. Kingsley Prize Declamation, Monday evening.  
 June 25. Entrance Examination, Tuesday.  
 June 25. Anniversary of Phi Beta Kappa Society, Tuesday.  
 June 26. Anniversary of the Society of Alumni, Wednesday.  
 June 27. Commencement, Thursday.

Vacation of ten weeks.

- Sept. 4. Entrance Examination, Wednesday.  
 Sept. 5. Fall Term opened Thursday.

#### 7. COURSE OF STUDY.

The full course of undergraduate study occupies four years. Students in each class are required to attend four exercises each day, including morning prayers. Biblical exercises are held each Monday morning, and Rhetorical exercises are attended by all the classes, twice a week, in the chapel.

The following table shows the course of study in the several classes, with the number of exercises during the past year, and the names of instructors having charge of them: \*

<i>Freshman Class.</i>		Exercises.
1. Mandeville's Elocution . . . . .	Professor Wilcox . . . .	72
2. Robinson's Algebra . . . . .	Professor Huntington, . . . .	48
3. Livy's History . . . . .	Professor Hopkins . . . .	48
4. Biblical Exercises . . . . .	Professor Huntington, . . . .	36
5. Homer's Iliad . . . . .	Professor Hopkins . . . .	48
6. Herodotus' History . . . . .	Professor North . . . . .	72
7. Robinson's Geometry . . . . .	Professor Root . . . . .	72
8. Odes of Horace . . . . .	Professor Hopkins . . . .	72
9. Lectures on Classical Authors . . . . .	Professor North . . . . .	6

\* During the absence of Professor North, instruction was given in Greek by Professor Mears and Professor Hopkins. Owing to the illness of Professor Wilcox, Professor Lewis, of Madison University, gave instruction in Logic and Rhetoric.

## Exercises.

10. Class Exercises in Composition . . . . . Professor Huntington, 36  
 11. Chapel Rhetorical Exercises . . . . . Professor Hopkins... 36

*Sophomore Class.*

1. Surveying and Navigation . . . . . Professor Root . . . . . 40  
 2. Demosthenes' "De Corona" . . . . . Professor Hopkins... 48  
 3. Blair's Rhetoric . . . . . Professor Lewis . . . . . 48  
 4. Robinson's Trigonometry . . . . . Professor Root . . . . . 70  
 5. Tacitus' "Germania and Agricola" . . Professor Hopkins... 45  
 6. Didot's Theocritus . . . . . Professor North . . . . . 40  
 7. Analytical Geometry . . . . . Professor Root . . . . . 72  
 8. Biblical Exercises . . . . . Professor Hopkins... 36  
 9. Class Exercises in Composition . . . . . Professor Hopkins... 36  
 10. Chapel Rhetorical Exercises . . . . . Professor Hopkins... 40  
 11. Lectures on Greek Orators . . . . . Professor North . . . . . 6  
 12. Lectures, Conchology and Mineralogy, Professor Root . . . . . 20

*Junior Class.*

1. Differential and Integral Calculus... Professor Root . . . . . 48  
 2. German Grammar and Reader . . . . . Professor Mears . . . . . 65  
 3. History of England . . . . . Professor Evans . . . . . 48  
 4. Ganot's Physics . . . . . Professor Huntington, 90  
 5. Æschylus' "Promethens Vincetus" . . Professor Mears . . . . . 72  
 6. Olmsted's Astronomy . . . . . Professor Peters . . . . . 48  
 7. Whately's Rhetoric . . . . . Professor Lewis . . . . . 30  
 8. Coppee's Logic . . . . . Professor Lewis . . . . . 30  
 9. Tacitus' History . . . . . Professor Hopkins... 48  
 10. Biblical Exercises . . . . . Professor Mears . . . . . 36  
 11. Historical Lectures . . . . . Professor Evans . . . . . 20  
 12. Lectures on Physics . . . . . Professor Huntington, 10  
 13. Forensic Disputations . . . . . Professor Lewis . . . . . 20  
 14. Chapel Rhetorical Exercises . . . . . Professor Hopkins... 30

*Senior Class.*

1. Hamilton's Metaphysics . . . . . Professor Mears . . . . . 90  
 2. Say's Political Economy . . . . . Professor Evans . . . . . 45  
 3. Dana's Geology . . . . . Professor Root . . . . . 45  
 4. Duer's Constitutional Law . . . . . Professor Evans . . . . . 25  
 5. Lectures on Chemistry . . . . . Professor Chester . . . . . 64  
 6. Blackstone's Commentaries . . . . . Professor Evans . . . . . 70

## Exercises.

7. Lectures on Evidences of Christianity.	President Brown	....	30
8. Agricultural Chemistry	Professor Chester	....	40
9. Butler's Analogy	President Brown	....	24
10. Lectures, Law and Political Economy.	Professor Evans	....	25
11. Lectures on Mental Philosophy	Professor Mears	....	10
12. Lectures on English Literature	President Brown	....	10
13. Forensic Disputations	Professor Evans	....	30
14. Moral Philosophy	President Brown	....	50
15. International Law	Professor Evans	....	10
16. Chadbourne's Natural Theology	President Brown	....	15
17. Original Chapel Orations	Professor Lewis	....	36

## 8. PRIZE CONTESTS.

Ten contests for prizes were held during the year, and a large number of students engaged in them. A thorough trial of their influence has furnished proof that they are decidedly beneficial in promoting industry, in removing temptations to useless reading, and in elevating the standard of scholarly discipline and attainment throughout the institution.

## PRIZES AWARDED IN 1872.

1. *Clark Prize in Oratory.* Brainard Gardner Smith, Canandaigua.

2. *Pruyn Medal Oration.* Cornelius Stanton Stowits, Canajoharie.

3. *Head Prize Oration.* John Henry Shepherd, New York.

Committee of Award: The Faculty of the College.

4. *Underwood Prizes in Chemistry.* 1. Asa Gardiner Benedict, Lysander. 2. William Perry Northrup, Canastota.

Committee of Award: Prof. Ambrose P. Kelsey.

5. *Kingsley Prizes in Extemporaneous Debate.* 1. Cornelius Stanton Stowits, Canajoharie. 2. James Franklin Tufts, Vernon.

Committee of Award: Hon. J. Watson Williams, Utica; M. M. Bagg, M. D., Utica; Alexander Seward, Esq., Utica.

6. *Curran Prizes in Classical Scholarship.* 1. Thomas Herbert Norton, St. Catharines, Canada. 2. John William O'Brien, Auburn.

7. *Hawley Medals.* Edward David Mathews, Homer; George Hubbard Payson, Oneida; Lansing Lee Porter, Auburn; Fred Myers Van Slyke, Little Falls.

Committee of Award: Prof. S. H. McMullin, Danville, Ky. ; Prof. J. W. Chenault, Centre College, Danville, Ky.

8. *Southworth Prizes in Natural Philosophy.* 1. Thomas Herbert Norton, St. Catharines, Canada. 2. Lapsing Lee Porter, Auburn.

Committee of Award: Prof. C. H. F. Peters, Ph. D.

9. *Tompkins Prizes in Mathematics.* 1. Charles Parmelee Eells, Cleveland, O. 2. Charles Carroll Hemenway, Marcellus.

Committee of Award: Prof. C. H. F. Peters, Ph. D.

10. *Prizes in English Composition.* Class of 1873: "Ancient and Modern Oratory," Oliver Ernesto Branch, North Madison, O. "The Paradise Lost," Fred Myers Van Slyke, Little Falls.

Class of 1874: "The Advantages of Mathematical Studies," Carlos Tracy Chester, Geneva. "The Incentives to a Literary Life," Charles Parmelee Eells, Cleveland, O.

Class of 1875: "The Study of Geography," Frank Samuel Childs, Leonardsville. "The History and Influence of Journalism," Willard King Spencer, Clinton.

Committee of Award: Rev. Anson J. Upson, D. D., Albany; Prof. Daniel J. Pratt, Albany; Rev. Amos H. Dean, Albany; Edward Savage, Esq., Albany; A. V. W. De Witt, Esq., Albany; Rev. W. S. Smart, D. D., Albany; Rev. S. W. Boardman, D. D., Auburn; Rev. O. S. Taylor, D. D., Auburn; Professor J. E. Myer, Auburn.

11. *Kingsley Prizes in Elocution.* Class of 1873: 1. Rodolphus Charles Briggs, Lee Centre; 2. Arthur John Caton, Ottawa, Ill.

Class of 1874: 1. John Phillips Silvernail, Binghamton; 2. Marcellus Eugene Cook, Utica.

Class of 1875: 1. Burt Isaiah Waldo, North Western; 2. Junius Judson Cowles, Osceola.

Committee of Award: Rev. James Eells, D. D., Cleveland, O.; Rev. Albert Erdman, Morristown, N. J.; Erastus B. Rudd, Esq., New York.

## 9. EXAMINATIONS.

In addition to the special contests for prizes, three regular examinations were held during the year that were open to the public; one at the close of each term. Each student was required to pass an examination on all the studies of his class, and sessions were held at the opening of each term for the hearing of delinquents.

In most of the studies, recitations were made from approved textbooks, with familiar explanations and criticisms by the instructor.



Whenever lectures were substituted for a text-book, they were followed by reviews and examinations. In all examinations, text-books were excluded from the class-room when the nature of the study would permit it.

#### 10. DISCIPLINE.

For censurable disorder or misconduct, warnings or suspensions are resorted to. A written excuse is required for every absence from college duties, unless the excuse is rendered in advance. Five unexcused absences are followed by a warning, and six warnings are equivalent to a suspension. A student whose standing is below five (on a scale of ten), cannot appear as one of the speakers on Commencement day.

#### 11. GRATUITOUS AID.

It is provided by a resolution of the trustees, that where the circumstances of the student render it necessary, his bills for tuition may be remitted, provided he proves himself a worthy member of the College, and completes his undergraduate course. Under this provision, the bills of about forty students are annually remitted. Sixteen scholarships have been donated to the College, which yield to their occupants enough to pay the ordinary term bills from the Treasurer.

#### 12. STATUTES AND BY-LAWS.

The laws of the College have been recently published, and a copy accompanies this report.

#### 13. DESCRIPTION AND VALUE OF COLLEGE GROUNDS, BUILDINGS AND MOVABLE PROPERTY.

The College grounds contain about forty acres of well improved land, ornamented with trees and flowers, and made accessible in every point by gravel roads and walks, and on this plot the College buildings are located. The principal buildings are as follows :

1. Three stone buildings, each four stories high, and forty-nine feet wide by ninety-eight feet long, for study, lodging and recitation rooms. The buildings are called Hamilton Hall or South College, Kirkland Hall, or Middle College, and Dexter Hall, or North College.

2. A stone chapel, three stories high, and fifty-one feet wide by eighty-one feet long, with lecture and recitation rooms.

3. A boarding-house.

4. A hall for collections of mineralogy, geology and natural history.

5. A gymnasium.

6. A chemical laboratory. This building, four years since, was entirely remodeled and renovated, and furnished with a large amount of new and valuable fixtures and apparatus, under the direction of Prof. E. W. Root, the Childs-Professor of Agricultural Chemistry, and since that time has been still further improved by Professor Chester, the present incumbent.

7. An astronomical observatory. This building has been thoroughly repaired in every part, and in several respects much improved.

8. A library hall, which has been completed during the present year.

The Alumni and friends of the College in the west have thus far furnished the funds for this building. It has cost about \$50,000, and, after the name of one of the principal donors, is called the "Perry H. Smith Library Hall."

9. A President's house, which, with the grounds attached thereto, recently purchased, has cost \$25,000. The house is now completed, and occupied by the President and family.

The real estate of the College is valued at.....	\$200,000 00
The Miscellaneous Library .....	20,000 00
The Noyes Library.....	50,000 00
Apparatus in chemical department .....	5,000 00
Apparatus in philosophical department .....	5,000 00
Instruments in astronomical department .....	20,000 00
Cabinet and natural history collections.....	20,000 00
Total .....	<u>\$320,000 00</u>

Reference is made to the reports of previous years for a more detailed statement respecting the property mentioned in this article.

#### 14. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

The other property of the College consists of its fixed funds, which are classified as follows:

The Maynard Fund .....	\$18,300 00
The other permanent funds.....	180,968 92
	<u>\$199,268 92</u>

These funds are securely invested in bonds and mortgages ; the principal is inviolate, and the annual income is devoted to the payment of the salaries of the officers and the ordinary expenses of the College.

At the present time, sixteen scholarships, of \$1,000 each, have been founded and endowed by friends of the College, the income of which is appropriated to the assistance of meritorious and indigent students.

The College has also a general fund, of which the nominal amount is about \$25,000.

This is made up of accounts, notes and judgments. Only a part can be regarded as available, and whatever is realized from it is applied to the payment of the current expenses of the College.

Separate foundations for prizes have also been established, which are designated as follows :

The Clark Prizes in Rhetoric.....	\$500 00
The Underwood Prizes in Chemistry.....	500 00
The Curran Medals in Classics.....	500 00
The Pruyn Medal on the Duties of Educated Young Men to the State.....	500 00
The Hawley Medals in the Classics.....	500 00
The Head Prize on Alexander Hamilton.....	500 00
The Kingsley Prizes in Elocution.....	700 00
The Kingsley Prizes in Extemporaneous Debate .....	1,500 00
The Tompkins Prizes in Mathematics .. ..	500 00
The Kirkland Prizes in Biblical Scholarship.....	500 00
The Southworth Prize in Natural Philosophy.....	500 00
	<hr/>
	\$6,700 00
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An effort is now in progress for the more complete endowment of the College and its different departments, including its library and collections in Natural History, and to increase the funds for aiding indigent students ; and considerable progress has been made in this direction.

#### 15. REVENUE.

This item appears under the head of income and expenditures.

#### 16. DEBTS.

The total indebtedness of the College at this date, July 1, 1872, was \$16,700. And this amount includes all debts due from the Col-

lege of every description, except the overdraft upon the treasury, and some expenditures attending the erection of the library hall and the President's house, which have not yet been liquidated.

17. INCOME AND EXPENDITURES.

The receipts of current funds during the past year have been as follows :

1. General Fund .....	\$2,220 72
2. Interest of Maynard Fund .....	1,149 75
3. Interest of other permanent funds.....	10,013 68
4. Term bills .....	6,711 00
	<hr/>
	\$20,095 15
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The disbursements of current funds for the same period have been as follows :

1. Philosophical Department.....	\$1,080 69
2. Library .....	157 47
3. Officers' salaries.....	16,220 01
4. Term expenses.....	984 22
5. Commencement expenses.....	735 68
6. Miscellaneous expenses.....	1,598 92
7. Prizes .....	469 75
8. Repairs and improvements .....	3,010 85
9. Interest .....	1,169 00
	<hr/>
	\$25,426 59
Deducts receipts as above.....	20,095 15
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Overdraft.....	\$5,331 44
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All of which is respectfully submitted, in accordance with a standing resolution of the Board of Trustees, authorizing the annual report to the Regents to be made by the President of the College and Secretary of the Board.

Dated HAMILTON COLLEGE, *December 20, 1872.*

SAMUEL G. BROWN,  
*President.*

O. S. WILLIAMS,  
*Secretary.*

## IV. HOBART COLLEGE, GENEVA, ONTARIO COUNTY.

*To the Regents of the University of the State of New York:*

The Trustees of Hobart College, in compliance with a requisition of the Regents of the University, submit the following report for the last collegiate year ending on the 18th day of July, 1872, being the day of the annual Commencement, containing a just and true statement of facts showing the progress and condition of said College, during and at the close of said year, in respect to the several subject-matters following, viz.:

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The Professorships in said College during said year, as established by the Trustees, were the following:

Startin-Professorship of the Evidences of Christianity.

Trinity-Professorship of Christian Ethics.

Hobart-Professorship of the Latin Language and Literature.

Horace White-Professorship of Rhetoric and Elocution.

Prendergast-Professorship of Astronomy and Natural Philosophy.

Professorship of Intellectual Philosophy.

Professorship of the Greek Language and Literature.

Professorship of Mathematics and Civil Engineering.

Professorship of Chemistry.

Professorship of English Language and Literature.

Professorship of Modern Languages.

Professorship of Oratory.

Professorship of History.

## 2. VISITORS.

The Rt. Rev. Horatio Potter, D. D., LL. D., D. C. L., Oxon.

The Rt. Rev. Arthur Cleveland Coxe, D. D., LL. D.

The Rt. Rev. Frederic Dan Huntington, D. D.

The Rt. Rev. Abram Newkirk Littlejohn, D. D.

The Rt. Rev. William Croswell Doane, D. D.

The Rev. Morgan Dix, S. T. D.

## 3. TRUSTEES.

William S. De Zeng, Esq., Geneva.

Thomas Davies Burrall, Esq., Geneva.

Joseph Fellows, Esq., Corning.

The Rev. William Shelton, D. D., Buffalo.

David Saxton Hall, Esq., Geneva, *Secretary*.

John H. Chedell, Esq., Auburn.

The Rev. M. Van Rensselaer, D. D., Geneva.

The Hon. James C. Smith, M. A., Canandaigua.

William B. Douglas, Esq., Rochester.

John H. Swift, Esq., New York.

The Rev. Walter Ayrault, D. D., Oxford.

The Rev. James Rankine, D. D., Geneva.

The Rev. Morgan Dix, S. T. D., New York.

Samuel G. Cornell, Esq., Buffalo.

The Rt. Rev. A. C. Coxe, D. D., LL. D., Buffalo, *Chairman*.

The Hon. Andrew D. White, LL. D., Ithaca.

The Hon. John H. Martindale, M. A., Rochester.

The Hon. George W. Nicholas, M. A., Geneva.

Alexander L. Chew, Esq., Geneva.

The Hon. Archibald C. Powell, M. A., Syracuse.

The Rt. Rev. F. D. Huntington, D. D., Syracuse.

The Hon. George F. Comstock, M. A., Syracuse.

Arthur P. Rose, M. A., Geneva.

Edgar H. Hurd, Esq., Treasurer and Trustee of Professorship and Scholarship Funds.

#### 4. OFFICERS OF INSTRUCTION AND GOVERNMENT.

The Rev. Maunsell Van Rensselaer, D. D., President, Trinity-Professor of Christian Ethics, Startin-Professor of the Evidences of Christianity, and Acting Professor of Intellectual Philosophy.

The Rev. Kendrick Metcalf, D. D., Horace White-Professor of Rhetoric and Elocution, and of the English Language and Literature.

John Towler, M. A., M. D., Professor of Civil Engineering and of Chemistry, and Acting Professor of Mathematics and Modern Languages.

Hamilton L. Smith, M. A., LL. D., Prendergast-Professor of Astronomy and Natural Philosophy.

The Rev. Francis T. Russell, M. A., Professor of Oratory.

Joseph H. McDaniels, M. A., Professor of the Greek Language and Literature.

Francis Philip Nash, M. A., LL. B., Hobart-Professor of the Latin Language and Literature.

The Rev. William Stevens Perry, D. D., Professor of History.

Lester Wheeler, B. A., Tutor in Latin and Mathematics.

Thomas R. Featherstonhaugh, B. A., Tutor in Greek.

The Rev. Kendrick Metcalf, D. D., Librarian.

———, Chaplain and Pastor on the Swift Foundation.

Professors Metcalf and McDaniels were absent the greater part of the year, in consequence of ill health.

### *Medical Faculty.*

John Towler, M. D., Dean and Registrar.

Hiram N. Eastman, M. D., Secretary.

John Towler, M. D., Professor of Chemistry, Pharmacy, Toxicology and Medical Jurisprudence, and of General and Special Anatomy.

Frederick Hyde, M. D., Professor of the Principles and Practice of Surgery.

Nelson Nivison, M. D., Professor of Physiology, Pathology and Microscopic Anatomy.

Hiram N. Eastman, M. D., Professor of the Practice of Medicine and Diseases of Women and Children.

E. P. Allen, M. D., Professor of Obstetrics and Materia Medica.

Charles E. Rider, M. D., Professor of Ophthalmology.

Miles G. Hyde, M. D., Demonstrator of Anatomy.

### 5. NUMBER AND CLASSIFICATION OF STUDENTS.

Whole number in attendance during the year, in the Academical Department, 40.

Seniors .....	7
Juniors.....	15
Sophomores.....	3
Freshmen.....	15

Total .....	40
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Graduates in the Academic Department .....	6
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Graduates in the Medical Department .....	8
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### 6. COMMENCEMENT EXERCISES.

The following is the order of exercises at the Commencement held Thursday, July 18, 1872:

## HOBART COLLEGE COMMENCEMENT,

*July 18, 1872.*

## ORDER OF EXERCISES.

## MUSIC.

March—Auf dem Felde der ehre.....Herrmann.

*Prayer.*

## MUSIC.

Overture—Merry Wives of Windsor.....Nicolai.

Salutatory Oration—Civilization Before and After Christianity ....Charles A. Pool.

## MUSIC.

Potpourri—Robert le Diable.....Meyerbeer.

Philosophical Oration—The Value of History .....Arthur C. Smith.

Oration—Energy versus Inactivity.....Clinton Sutphen.

Oration—Robert Burns .....Charles R. Keyes.\*

Oration—The Physical Basis of Life .....Appleton I. Ide.\*

## MUSIC.

Fantasie—Reverie .....Vieux-temps.

Valedictory Oration—Whither are we Tending .....George Smith.

## MUSIC.

Overture—Flotte Bursche .....Suppe.

*Awarding of Prizes.*

## MUSIC.

Potpourri—Rigoletto .....Verdi.

*Conferring of Degrees.*

## MUSIC.

Polka—Farewell.....Parlow.

## BENEDICTION.

## CLASS OF '72.

JAMES ABERCROMBIE, Jr.  
 CHARLES H. BLAIR.  
 J. K. FRANKLIN.  
 CHARLES GORDON.  
 CHARLES HURD.  
 SCHUYLER HURD.  
 APPLETON J. IDE.  
 CHARLES R. KEYES.

THOMAS M. MILLER.  
 CHARLES A. POOL.  
 ARTHUR C. SMITH.  
 GEORGE SMITH.  
 MORRIS SLATTERY.  
 CHARLES F. STUART.  
 CLINTON SUTPHEN.

The following Honorary Degrees were conferred in 1872:

B. A. James Abercrombie, Jr.

M. A. The Rev. George W. Southwell; Hugh W. Taylor.

D. D. The Rev. John Steinfort Kidney, Union; the Rev. James H. Elliott, University of South Carolina.

\* Excused.



LL. D. Albert J. Myer, Hobart; the Rev. Samuel Osgood, D. D., Harvard.

### 7. COLLEGE TERMS.

First Term, September 7 to December 20, fifteen weeks.

Second Term, January 11 to April 24, fifteen weeks.

Third Term, May 2 to July 18, eleven weeks.

### 8. SUBJECTS AND COURSES OF STUDY.

#### I. DEPARTMENT OF LATIN LANGUAGE AND LITERATURE.

##### *Freshman Class.*

	Exercises.
First Term, Cicero De Senectute and De Amicitia . . . . .	76
Second Term, Selections from Livy . . . . .	51
Third term, Odes and Epodes of Horace . . . . .	45

##### *Sophomore Class.*

First term, Odes of Horace . . . . .	49
Second term, Satires and Art Poetica of Horace . . . . .	62
Third term, three Plays of Terence . . . . .	54

N. B.—These classes reviewed portions of Harkness' Latin Grammar, and were exercised in Latin Composition through the year.

#### II. DEPARTMENT OF GREEK LANGUAGE AND LITERATURE.

##### *Freshman Class.*

First term, Greek Testament and three books of Odyssey . . . . .	73
Second term, Greek Testament and fourth, fifth and ninth Books of Odyssey . . . . .	50
Third term, Greek Testament and six chapters of Book I of Memorabilia . . . . .	47

N. B.—This class reviewed Hadley's Grammar during the year.

##### *Sophomore Class.*

First term, Felton's Greek Historians . . . . .	63
Second term, Lysias and Demosthenes . . . . .	36

#### III. DEPARTMENT OF MATHEMATICS.

##### *Freshman Class.*

First term, Loomis' Algebra . . . . .	54
Second term, Loomis' Plane Geometry . . . . .	63
Third term, Loomis' Spherical Geometry . . . . .	36

*Sophomore Class.*

	Exercises.
First term, Mensuration, Land Surveying, Plane and Spherical Trigonometry .....	57
Second term, Differential Calculus .....	46
Third term, Integral Calculus .....	34

IV. DEPARTMENT OF NATURAL SCIENCE.

*Sophomore Class.*

Third term, Chemistry .....	36
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*Junior Class.*

First term, Ganot's Physics .....	57
Second term, Ganot's Physics (finished) .....	52
Third term, Mathematics of Astronomy .....	48
Third term, Physics of Heat .....	10

*Senior Class.*

First term, Astronomy .....	67
First term, Guyot's Earth and Man .....	34
Second term, Meteorology .....	45
Third term, Geology .....	28

V. DEPARTMENT OF ETHICS AND EVIDENCES.

*Sophomore Class.*

First and Second terms, Paley's Natural Theology .....	25
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*Junior Class.*

Paley's Evidences of Christianity, through the year .....	34
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*Senior Class.*

First term, Butler's Analogy .....	34
Third term, Moral Science—Alexander's .....	19

VI. DEPARTMENT OF LOGIC AND MENTAL SCIENCE.

*Junior Class.*

First term, Whately's Logic .....	39
Second term, Thomson's Outline of the Laws of Thought .....	36
Third term, Hamilton's Metaphysics, eight chapters .....	20

*Senior Class.*

Second term, Hamilton's Metaphysics (finished) .....	47
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# VII. DEPARTMENT OF MODERN LANGUAGES.

## *Junior Class.*

	Exercises.
Second term, German .....	52
Third term, German—Schiller's "Neffels Onkel," &c.....	36

## *Senior Class.*

First term, French.....	52
Second term, French .....	36

# VIII. DEPARTMENT OF RHETORIC AND ELOCUTION AND OF THE ENGLISH LANGUAGE AND LITERATURE

## *Freshman Class.*

Second and Third terms, Exercises in Declamation and Composition .....	18
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## *Sophomore Class.*

Exercises in Declamation and Composition and Debating through the year.....	23
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## *Junior Class.*

First and Second terms, Declamation and Composition.....	22
First and Second terms, Whately's Rhetoric.....	47

## *Senior Class.*

First term, Compositions and Debates ....	6
First term, Shaw's English Literature .....	29
Second term, Schlegel's Literature .....	38
Third term, Muller's Philology .....	8

# IX. DEPARTMENT OF HISTORY AND POLITICAL SCIENCE.

## *Senior Class.*

Second term, Political Science.....	21
Third term, De Tocqueville's Democracy in America.....	10

On Greek Literature, by Professor McDaniels.

On History, by Professor Perry.

On Elocution and Vocal Culture, by Professor Russell.

#### 9. PRIZES.

##### 1. *Horace White Rhetorical Prize.*

A gold medal of the value of \$35 is awarded annually to the member of the Senior or Junior Class who delivers the best original oration. The competition takes place on the day preceding commencement. The medal this year was awarded to William Perez Conger, of the Junior Class.

##### 2. *Horace White Essay Prizes.*

A gold medal of the value of \$25, and a silver medal of the value of \$10, are awarded at the end of each academic year to the writers of the two best English essays in prose or verse. The prize this year was awarded, the first to Charles Augustus Pool, of the Senior Class. The second was not awarded.

##### 3. *The Cobb Prizes.*

Two gold medals of the value of \$20 and \$15 are awarded annually to the writers of the two best essays on some subject connected with English literature. The competition is open to the Senior and Junior Classes.

##### 4. *The Faculty Prize.*

There is an exhibition of the Sophomore Class at the end of the first term, when prizes are awarded for the two best declamations.

##### 5. *The Greek Prize.*

A prize is given annually by the Professor of Greek to that member of the Junior Class who shall sustain the best examination on some subject previously assigned, and not included in the regular course of study.

##### 6. *The Latin Prize.*

A prize is given annually by the Hobart Professor of Latin to the member of the Sophomore Class who shall sustain the best examination in Latin prose composition.

Prizes 3, 4, 5, 6 were not awarded this year.

**10. EXAMINATIONS.**

Examinations of all the classes were held at the end of each term in all the studies pursued during the term. They were conducted both orally and in writing. In determining the College standing of students, the examination marks have equal weight with the term marks.

**11. MODE OF INSTRUCTION.**

Instruction is given both by recitation and lectures. Lectures are mostly used with the upper classes.

**12. DISCIPLINE.**

The discipline is administered by the President, and consists chiefly in enforcing those principles of gentlemanly and Christian conduct which all persons are expected to assent to as proper and becoming.

**13. GRATUITOUS AID.**

Tuition is free to all who are on any scholarships, and to such other persons as the President, in his discretion, may see fit to admit to free tuition. There are at present fifteen Ayrault scholarships, designed exclusively for those who are pursuing their studies with a view to the ministry of the Protestant Episcopal church. These scholarships yield \$100 per annum. There are three Pierrepont scholarships, which may be given to persons intending to enter the ministry of the Protestant Episcopal church, or to sons of clergymen of the same, being communicants, and which yield about \$120 per annum. There are also two other scholarships of \$60 each per annum, which may be given to any worthy students upon the proper recommendation.

**14. STATUTES AND BY-LAWS.**

These are few and simple, and so well understood that they are still out of print, without any sensible inconvenience.

**15. DESCRIPTION AND VALUE OF THE PUBLIC BUILDINGS.**

The same as in last report.

## 16. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

Annuity from Trinity church, New York, equal to a capital of .....	\$50,000 00
Annuity from the Society P. R. and L. in S. N. Y., equal to a capital of.....	8,333 33
Hobart Professorship Fund .....	17,940 65
Horace White Professorship Fund .....	20,502 95
Prendergast Professorship Fund .....	18,969 54
Chaplaincy Fund .....	23,582 89
Ayrault Scholarship Fund .....	29,429 46
Pierrepoint " .....	6,000 00
John Watts " .....	1,000 00
Henry Laight " .....	1,000 00
Horace White Prizes, annuity on capital equal to ....	1,000 00
Cobb Prize Fund .....	500 00
New Philosophical Apparatus .....	6,635 00
President's House.....	5,000 00
Post House .....	2,000 00
Endowment Fund not especially appropriated.....	53,962 61
	<hr/>
	\$245,856 43
	<hr/>

## 17. REVENUE.

Tuition.....	\$682 95
Room rent.....	153 76
Contingents from students .....	769 78
Annuity from Trinity church, New York.....	3,000 00
Annuity from Society P. R. and L., two years.....	1,140 00
Hobart Professorship Fund.....	1,268 24
Horace White " .....	1,280 82
Prendergast " .....	1,391 24
General Endowment Fund.....	1,794 60
Ayrault Scholarship Fund .....	294 29
Pierrepoint " .....	60 00
John Watts " .....	10 00
Henry Laight " .....	10 00
Chaplain .....	445 77
President's House.....	116 76
	<hr/>
	\$12,418 21
	<hr/>

## 18. DEBTS.

There is a floating debt of \$5,015.90.

## 19. EXPENDITURES.

Salaries of President and Professors.....	\$10,244 52
Salaries of Treasurer and Secretary .....	600 00
Contingent expenses.....	2,187 72
	<hr/>
	\$13,032 24
	<hr/>

## 20. TABULAR STATEMENT.

Number of Collegiate departments or courses of study.....	9
Number of Professors .....	8
Number of Tutors, etc .....	2
Number of Collegiate students during the year .....	40
Number of graduates at last commencement—	
Full course.....	3
Scientific course .....	3
Whole number of graduates.....	437
	<hr/>
Value of College buildings and grounds, exclusive of the	
Medical College and lot.....	\$43,000 00
Value of Library and Apparatus.....	15,000 00
Value of Cabinet and Minerals, containing 10,000	
specimens .....	4,000 00
Dwelling-houses.....	7,000 00
Other College property.....	232,221 43
Revenue for the last Collegiate year .....	12,418 21
Expenditure for the last Collegiate year.....	13,032 24
Floating debt payable by sinking fund.....	5,015 90
	<hr/>

## 21. PRICE OF TUITION, ETC.

Tuition per term, \$15; per year, \$45. Room rent, per term, \$3; per year, \$9. Contingent expenses, per term, \$7; per year, \$21.

All of which is respectfully submitted by the undersigned, who are a committee of the Board of Trustees appointed for this purpose.

[L. s.]

M. VAN RENSSELAER.  
WM. S. DE ZENG.  
DAVID S. HALL.

## V. UNIVERSITY OF THE CITY OF NEW YORK, NEW YORK CITY.

[Up to the time of printing these pages, the annual report of this institution, though repeatedly solicited and promised, had not been received. If received at a sufficiently early day hereafter, it will be printed at the end of the other College reports.]



## VI. MADISON UNIVERSITY, HAMILTON, MADISON CO.

*To the Regents of the University of the State of New York :*

The Trustees of Madison University respectfully present the following report for the year ending June 19th, 1872 :

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

1. Metaphysics and Evidences of Revealed Religion.
2. Hebrew.
3. Logic.
4. Natural Sciences.
5. Greek Language and Literature.
6. English Literature and Civil History.
7. Latin and Modern Languages.
8. Natural History.
9. Moral Philosophy.
10. Mathematics.

## 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

*Corporation.*

James B. Colgate, President, New York. (P.)

\* Henry Tower, Waterville. (P.)

Alvah Pierce, Hamilton. (P.)

Charles O. Payne, Hamilton. (P.)

Augustus Simons, Hamilton. (P.)

Hon. Alrick Hubbell, Utica. (P.)

Hon. E. Reed Ford, Oneonta.

David A. Munro, Camillus.

Hon. Caleb Van Husen, Detroit, Mich.

Hon. Charles York, Norwich.

Ebenezer Cauldwell, New York.

Alonzo Peck, Eaton. (P.)

Hon. Charles Mason, LL. D., Hamilton. (P.)

John Munro, A. M., Elbridge.

Hon. Albert R. Fox, Sand Lake.

Saml. Colgate, New York. (P.)

Theodore F. Humphrey, Albany.

\* Deceased June 27th, 1872.

(P.) Present at the annual meeting, June 17th, 1872.

George H. Andrews, New York.  
 Rev. Walter R. Brooks, D. D., Secretary, Hamilton. (P.)  
 P. B. Spear, D. D., Treasurer, Hamilton. (P.)  
 Rev. Thomas D. Anderson, D. D., New York. (P.)  
 Hon. Thomas Cornell, Rondout.  
 Henry O. Wheeler, A. M., Yates.  
 John B. Trevor, New York.  
 Morgan L. Smith, Newark, N. J. (P.)  
 Hosmer H. Keith, Hamilton.  
 Rev. Edward Lathrop, D. D., Conn. (P.)  
 Albert S. Bickmore, Ph. D., New York. (P.)  
*Librarian.*—Prof. N. L. Andrews.  
*Steward.*—William Richardson.  
*Janitor.*—Warren Rich.

### *Faculty.*

1. Ebenezer Dodge, D. D., LL. D., President, Professor of Metaphysics.
2. Philetus B. Spear, D. D., Professor of Hebrew.
3. Alexander M. Beebee, D. D., Professor of Logic.
4. Lucien M. Osborne, LL. D., Professor of Natural Sciences.
5. N. Lloyd Andrews, A. M., Professor of Greek Language and Literature.
6. John James Lewis, A. M., Professor of English Literature and Civil History.
7. Edward Judson, A. M., Professor of Latin and Modern Languages.
8. ——— ———, Professor of Natural History.
9. Hezekiah Harvey, D. D., Bleeker-Professor of Moral Philosophy.
10. James M. Taylor, A. M., Professor of Mathematics.
11. George N. Arnold, A. B., Tutor of Languages.

### 3. NUMBER OF STUDENTS.

Whole number of students connected with the College during the year .....	114
Number dismissed .....	2
Number at close of the year.....	112
Graduates at Commencement.....	17
Whole number of graduates....	652
None admitted under fourteen.	

(P.) Present at the annual meeting, June 17th, 1872.

4. CLASSIFICATION OF STUDENTS.

Freshmen . . . . .	34
Sophomores . . . . .	24
Juniors . . . . .	40
Seniors . . . . .	16
Theological students . . . . .	22
Students in grammar school . . . . .	51
Whole number in University . . . . .	187

5. COMMENCEMENT EXERCISES.

The following is a copy of the scheme for the last commencement:

- MUSIC.
- Prayer.*
- MUSIC.
1. Greek Salutatory . . . . . John Elias McLallen, Trumansburgh.
- MUSIC.
2. Oration of the First Class—The Advantages of Party Spirit in America,  
Adoniram Judson Chandler, Chester, Vt.
3. Oration—The Lost Tribes of Israel . . . . .\* David Read Coe, Oneida.
4. Oration of the First Class—American Journalism,  
Henry Allan Cornell, Sing Sing.
5. Oration of the First Class—Culture Essential to Society,  
Kah-Chur, Shwaygyeen, Burmah.
6. Oration of the First Class—Faith in Humanity,  
Marcus Clark Mason, Strykersville.
- MUSIC.
7. Oration of the First Class—The Indebtedness of Italy to Cavour,  
Ross Matthewes, New York.
8. Oration of the First Class—The Law of Spiritual Development,  
John Elias McLallen, Trumansburgh.
9. Oration of the First Class—The Future of India, Myah-Sah, Rangoon, Burmah.
10. Oration of the First Class—Man and his Ideals,  
Judson Orren Perkins, Cazenovia.
- MUSIC.
11. Oration of the First Class—Mediæval Monachism,  
Elnathan Gooding Phillips, Bristol.
12. Oration of the First Class—Our Future, Westward,  
Charles Albert Piddock, Brooklyn.
13. Oration of the First Class—Reform in the Individual and in the State,  
Joseph White Robinson, Stamford.
14. Oration of the First Class—The Legacy of Literature,  
Hugh Owain Rowlands, Waukesha, Wis.

\* Excused.

## MUSIC.

15. Philosophical Oration—The Mission of Orientalism,

Albert Edward Waffle, Andover.

16. Classical Oration—The Relations of the Individual to Humanity,

Cyrus Stewart Sherman, Dover, Vt.

## MUSIC.

17. Valedictory Oration and Addresses—Prometheus,

Henry Thompson, Alexandria, Va.

The Degree of Bachelor of Arts (A. B.) was conferred on the above seventeen.

*Conferring Awards and Degrees.*

## BENEDICTION.

The Degree of Doctor of Laws (LL. D.) was conferred on Judge Daniel Pratt Baldwin, LL. B., of Logansport, Ind.

The Degree of Doctor of Philosophy (Ph. D.) was conferred on Professor Heman H. Sanford, A. M., of the Syracuse University.

The following persons received the Degree of A. M. in course: G. K. Allen, Corydon Crain, J. J. Townsend, S. A. Thomas, Ezra Tinker, N. H. Dimon, J. F. Murphy, E. K. Chandler, W. C. Eaton, David R. Watson.

## 6. COLLEGE TERMS AND SESSIONS.

There have been three terms of thirty-nine weeks in all—the terms having been made slightly unequal by a change of the College calendar.

The first term began September 28th. The second term began January 3d. The third term began April 1st.

The vacations are: 1st, of twelve weeks at the close of the year; 2d, of ten days at the Christmas holidays; 3d, of three days at the close of second term.

Annual Commencement was held on June 19th.

## 7. COURSE OF STUDY.

The course of study corresponds with the work accomplished by the classes, as reported by the Faculty, as follows:

*Freshman Class.*

*First Term.* In Latin, the class read and reviewed in Livy the Preface and the first twelve chapters of the twenty-second book, with a daily oral exercise and a weekly written exercise in Latin Prose Composition.

In Greek, the class read the third book of Homer's Iliad, with daily Grammar lessons and weekly recitations in Smith's History of Greece.

In English, the class had regular weekly exercises in Biographical Composition and in Declamation.

In Mathematics, first four books of Davies' Legendre. Thirty propositions with original demonstrations by the class.

*Second Term.* In Latin, the class read and reviewed twenty-three chapters of the twenty-second book of Livy, with daily oral exercises and weekly written exercises in Latin Prose Composition.

In Greek, the class read the ninth book of Homer's Iliad, with daily Grammar lessons. Weekly recitations in Greek New Testament.

In English, regular weekly exercises in Biographical Composition and in Declamation.

In Mathematics, the last five books of Davies' Legendre.

*Third Term.* In Latin, half of the first book and the whole of the fourth book of the Odes of Horace, with the Carmen Sæculare. Weekly recitations in Liddell's History of Rome.

In Greek, the first, third and fourth chapters of the first book of Xenophon's Memorabilia, with written exercises in Greek Prose Composition. Essays on Socrates and his Age. Weekly recitations in Greek New Testament.

In English, regular weekly exercises in Biographical Composition and in Declamation alternately.

In Mathematics, Plane, Analytical and Spherical Trigonometry, and Mensuration.

### *Sophomore Class.*

*First Term.* In English, one hundred pages of Coppeé's Rhetoric and nearly as many pages in Hart's Composition and Rhetoric, accompanied by written exercises in qualities of style and in the analysis of themes. Alternate weekly exercises in Declamation and in Historical and Political Composition.

In Natural Science, Youman's Chemistry through the term.

In Modern Languages, daily exercises in Magill's French Grammar and in Molière's Bourgeois Gentilhomme. Weekly lectures by the instructor on French Literature.

*Second Term.* In Greek, selections from first and second books of Thucydides, with written exercises in Greek Prose Composition, and weekly recitations in Smith's History of Greece.

In Natural Science, lectures on Organic Chemistry and lectures on Physical Geography through the term.

In Modern Languages, daily lessons in Whitney's German Grammar and in Schiller's William Tell.

In English, alternate weekly exercises in Declamation and in Historical and Political Composition.

*Third Term.* In Latin, the Agricola and the Germania of Tacitus. Essays by the class upon subjects connected with Imperial Rome.

In Greek, thirty-five pages in Champlin's edition of Demosthenes on the Crown.

In Mathematics, the first one hundred and seventy pages of Davies' New Surveying.

In English, without review, one hundred and nineteen pages in Shaw's Manual of English Literature. Alternate weekly exercises in Declamation and in Historical and Political Composition.

### *Junior Class.*

*First Term.* In Latin, the class read and reviewed thoroughly in the second book of the Epistles of Horace, the first epistle and the Ars Poetica, and read extemporaneously several of the Satires, and presented weekly written translations and paraphrases of the epistles.

In Greek, the Agamemnon of Æschylus, with essays by the class on the principal authors in Greek literature.

In English, Logic, daily recitations through the term. Subject completed and reviewed. Whately. No recitations lost. Weekly elocutionary exercises.

*Second Term.* In Latin, the De Senectute of Cicero read and reviewed during the first half of the term.

In German, the first act of Goethe's Iphigenia read and reviewed during the latter half of the term.

In Greek, Plato's Phædo, with lectures on Platonism, and essays by the class on the different Schools of Greek Thought.

In Mathematics, Snell's Mechanical Philosophy entire.

In English, weekly elocutionary exercises.

*Third Term.* Pneumatics, Hydrostatics, Acoustics, Light and Electricity—Snell's.

In Natural Science, Dana's Geology through the term.

In English, 120 pages of Kames' Elements of Criticism. Weekly elocutionary exercises.

### *Senior Class.*

*First Term.* In Metaphysics, Text-book, Porter's Intellect. Daily recitations. Essays by the class. Lectures by the Professor.

In Hebrew, the first four chapters of Genesis, and the twenty-second chapter of Numbers read and analyzed, with Gesenius' Hebrew Grammar, and exercises on the blackboard.

In History, nearly all of Weber's Outlines of History, except Greek and Roman History, taking twenty-three pages of early history, about three hundred pages of European History, and ninety-two pages of American History. Class essays and debates on themes kindred to the study, and chapel orations.

*Second Term.* In Moral Philosophy, daily recitations in Wayland's Moral Science, with lectures; completed subject of Theoretical Ethics; part of Practical Ethics; and reviewed.

In History, 275 pages of Hume's History of England, and 100 pages of Schlegel's History of Literature. Class essays and debates on subjects kindred to the study. Chapel orations.

In Loomis' Astronomy, the Solar System entire.

*Third Term.* In Evidences of Christianity, Text-book, Dodge's Evidences. Daily recitations. Synopsis of omitted portions by the class. Lectures by the Professor.

In Loomis' Astronomy, Planetary System, comets, fixed stars, with review of entire work.

In Natural Science, lectures on Physiology during the term.

In Hebrew, three chapters of Job read and analyzed, and the Grammar reviewed during the first four weeks of the term.

### 8. EXERCISES.

To the beginning of the present year, alternate weekly exercises were held in English Composition and Declamation. The essays and orations were severally criticised by the Professor in that department, and the declaimers were also drilled by him before each exercise.

Since the beginning of the present year, two exercises are held in every week of term time, as follows: On Tuesday, twelve declamations, the speakers appearing in alphabetical order from the Freshman, Sophomore and Junior Classes.

On Friday, two essays from the Freshman Class, two essays from the Sophomore Class, two written debates from the Junior Class, and two (or three) chapel orations from the Senior Class. The essays, debates and orations are criticised by the Professor on Thursday, when the papers are required for private criticism.

In the first term of Senior year, class debates are held on Tuesday mornings, by sections of eight, in alphabetical order, the Professor in Oratory presiding.

In the second term, the Freshman Class will have one daily exercise of one hour, in the elements of Reading and Oratory; the principles being those of Mandeville, and the reading passing on to the reading of Hymns and of the Scriptures, also to the examination and reading of some play of Shakspeare's.

The orations for Junior exhibition are required two weeks before the exhibition for examination by the Professor in English, and each speaker is drilled by the Professor at least four times before the exhibition.

#### 9. PRIZE CONTESTS AND EXHIBITIONS.

1. The Lewis Prize Exhibition, for excellence of composition and delivery, was held on March 27th. The number of competitors was six. The prize of seventy dollars was awarded to A. E. Waffle (\$70.00).

2. The Montgomery Prize Declamation was held on the 27th of October. The number of competitors was twelve. The first prize was awarded to M. C. Mason, \$25; the second to Ross Matthews, \$20; the third to Henry Thompson, \$15; the fourth to E. A. Waffle, \$10.

3. The Baldwin Prize examinations in Greek and Latin were held on May 25th and on June 8th. The prize for best Greek examination was awarded to Ceylon H. Lewis, \$25.

The prize for best Latin examination written was awarded to Ceylon H. Lewis, \$25.

4. The Lasher prizes for best essays was awarded first to Ceylon H. Lewis, \$20; and the second to Robert T. Jones, \$15.

5. The Sophomore Prize essays were awarded as follows: first, George A. Smith, \$20; second, Louis J. Gross, \$15.



The Freshman Prize essays were awarded as follows: first, Giles Hubbard, \$20; second, Edward J. Brownson, \$15.

6. The Royce Prize Declamation was held June 17. The prizes were awarded as follows: Freshmen—first, Edward J. Brownson; second, Seward Robson. Sophomores—first, George A. Smith; second, Samuel W. Nichols. Juniors—first, Byron A. Woods; second, Ceylon H. Lewis.

7. The Dodge Prizes for excellence in entrance examinations were awarded as follows: first, George E. Mott, \$30; second, Wm. L. Kolb, \$25; third, Truman G. Brownson, \$20; fourth, E. S. Gardner, \$20.

The following are copies of the examination papers for the Baldwin Classical Prizes:

GREEK EXAMINATION, MAY 25, 1872.

SUBJECT: "*The Antigone of Sophocles.*"

Translate:

- (A) οὐκ οἶδ'· ἐκεῖ γὰρ οὔτε τοῦ γενῆδος ἦν  
 πληγμ', οὐ διέλλης ἐκβολή· στυφλὸς δὲ γῆ  
 καὶ χέρσος, ἀρρῶξ οὐδ' ἐπημαξευμένη  
 τροχοῖσιν, ἀλλ' ἄσημος οὐργάτης τις ἦν.  
 ὅπως δ' ὁ πρῶτος ἡμῖν ἡμεροσχόπος  
 δείκνυσι, πᾶσι θαῦμα δυσχερές παρῆν.  
 ὁ μὲν γὰρ ἠφάνιστο, τυμβήρης μὲν οὐ  
 λεπτή δ' ἄγρος φεύγοντος ὥς ἐπῆν κόνις.  
 σημεῖα δ' οὔτε θηρὸς οὔτε τοῦ κυνῶν  
 ἐλθόντος, οὐ σπάσαντος ἐξεφαίνετο.  
 λόγοι δ' ἐν ἀλλήλοισιν ἐρρόθουν κακοί,  
 φύλαξ ἐλέγχων φύλακα, καὶ ἐγίγνετο  
 πληγὴ τελευτῶσ', οὐδ' ὁ κωλύσων παρῆν.  
 εἰς γὰρ τις ἦν ἕκαστος οὐξειργασμένος,  
 κούδεις ἐναργής, ἀλλ' ἔφευγε μὴ εἰδέναι.  
 ἡμεν δ' ἔτοιμοι καὶ μύδρους αἶρειν χεροῖν,  
 καὶ πῦρ διέρπειν, καὶ θεοὺς ὀρχωμοτεῖν  
 τὸ μήτε δρᾶσαι μήτε τῷ ξυνειδέναι  
 τὸ πρᾶγμα βουλεύσαντι μήτ' εἰργασμένῳ.

1. Give the composition or derivation of the following words:  
 ἐκβολή, ἀρρῶξ, ἡμεροσχόπος, δυσχερές, ἠφάνιστο.

2. State the more common meanings of ὅπως, and point out the peculiar sense found here.

3. Explain the use of *ἄν* with *ἐγίγνετο*, and suggest why we have *ἐγίγνετο*, and not *ἐγένετο*.

4. On what principle is *μὴ* used before *εἰδέναι*?

5. What custom is brought out in the last four lines? Has it had any parallel in later times?

Translate :

- (B) *KP.* οἱ τηλικοῖδε καὶ διδαζόμεσθα δὴ  
           φρονεῖν ὑπ' ἀνδρὸς τηλικοῦδε τὴν φύσιν;  
*AI.* μηδὲν τὸ μὴ δίκαιον· εἰ δ' ἐγὼ νέος,  
           οὐ τὸν χρόνον χρή μᾶλλον ἢ τᾶργα σκοπεῖν.  
*KP.* ἔργον γάρ ἐστι τοὺς ἀκουσμοῦντας σέβειν;  
*AI.* οὐδ' ἄν κελεύσαιμ' εὐσεβεῖν ἐς τοὺς καχοὺς.  
*KP.* οὐχ ἦδε γὰρ τοιᾶδ' ἐπέιληπται νόσφ;  
*AI.* οὐ φησι θήβης τῆσδ' ὁμόπτολις λεώς.  
*KP.* πόλις γὰρ ἡμῖν ἀμέ χρή τάσσειν ἐρεῖ;  
*AI.* ὁρᾷς τόδ' ὥς εἴρηκας ὥς ἄγαν νέος;  
*KP.* ἄλλω γὰρ ἢ 'μοὶ χρή με τῆσδ' ἄρχειν χθονός;  
*AI.* πόλις γὰρ οὐκ ἔσθ' ἥτις ἀνδρός ἐσθ' ἐνός.  
*KP.* οὐ τοῦ κρατοῦντος ἢ πόλις νομίζεται;  
*AI.* καλῶς ἐρήμης γ' ἄν σὺ γῆς ἄρχοις μόνος.  
*KP.* δδ', ὥς ἔοικε, τῇ γυναικὶ συμμαχεῖ.  
*AI.* εἴπερ γυνὴ σύ· σοῦ γὰρ οὖν προκήδομαι.  
*KP.* ὦ παγχάχιστε, διὰ δίκης ἰὼν πατρί.  
*AI.* οὐ γὰρ δίκαιά σ' ἔξαμαρτάνονθ' ὁρῶ.  
*KP.* ἁμαρτάνω γὰρ τὰς ἐμὰς ἀρχὰς σέβων;  
*AI.* οὐ γὰρ σέβεις τιμὰς γε τὰς θεῶν πατῶν.

1. State the nature of the supposition in the third and fourth lines.

2. Explain the use of *γάρ* in the seventh, ninth and twelfth.

3. State the elements of *ἀμέ*, and define their respective construction.

4. Point out and define the different uses of participles in this passage.

5. Write, with metrical analysis, the last four lines.

Translate :

- (C) ὦ τύμβος, ὦ νυμφεῖον, ὦ κατασχαφῆς  
           οἴκησις ἀείφρουρος, οἱ πορεύομαι  
           πρὸς τοὺς ἐμαυτῆς, ὧν ἀριθμὸν ἐν νεκροῖς  
           πλεῖστον δέδεκται Φερσεφασσ' ὀλωλότων·  
           ὧν λoiseθία 'γὼ καὶ χάχιστα δὴ μακρῷ  
           κάτειμι, πρίν μοι μοῖραν ἐξήκειν βίου.

ἐλθούσα μέντοι χάρτ' ἐν ἐλπίσιν τρέφω  
 φίλη μὲν ἦξειν πατρὶ, προσφιλὴς δὲ σοὶ,  
 μήτερ, φίλη δὲ σοὶ, κασίγνητον χάρα·  
 ἐπεὶ θανόντας αὐτόχειρ ὑμᾶς ἐγὼ  
 ἔλουσα κακόσμησα καπιτυμβίους  
 χοὰς ἔδωκα· νῦν δὲ, Πολύνεικες τὸ σὸν  
 δέμας περιστέλλουσα τοιάδ' ἄρνυμαι.  
 καίτοι σ' ἐγὼ ᾿τίμησα τοῖς φρονοῦσιν εὖ.

1. Who were Antigone's father and mother? To what original crime are these tragic events related? and what was the fate of each?

2. What belief or sentiment of the Greeks prompted the heroic act of Antigone?

(A) Name some of Sophocles' principal contemporaries in literature, politics, philosophy and art; and state a few points of comparison with Æschylus and Euripides.

(B) Upon what heroic legend is the Antigone based? and what two other plays of Sophocles is it connected with?

(C) Tell briefly the story of Antigone, and state the moral intention of the dramatist.

(D) Characterize, in few words, Antigone, Ismene, Creon and Hæmon.

Translate into Greek:

(A) Cease, before you fill me with anger, lest you be found senseless in saying that the gods honor this man who came to burn their temples. Do we see the gods honoring the bad? Unless you shall discover the author of this burial, you shall die, in order that men may learn that it is not proper to snatch gain from everything.

1. παύομαι. 2. πρίν. 3. μεστό-ω. 4. ὀργή. 5. ἐφευρίσκω. 6. ἄνους. 7. τιμάω. 8. πυρόω. 9. ναός. 10. εἰσοράω. 11. καχός. 12. εὐρίσκω. 13. αὐτόχειρ. 14. τάφος. 15. θνήσκω. 16. μανθάνω. 17. δεῖ. 18. ἀρπάζω. 19. κέρδος.

(B) It was not Zeus who proclaimed these things, nor the gods below. Thy proclamations are not so strong as to transgress the unwritten institutions of the gods. Of these I was not going to pay the penalty through fear of any man. If I had left my brother unburied, I should

not be able to live. Thy words are not pleasing, nor may they ever be!  
 Whence could I have obtained greater glory than by placing my own  
 brother in the tomb?

1. κηρύσσω. 2. κάτω. 3. κήρυγμα. 4. σθένω. 5. ὑπερβαίνω. 6. ἄγραπτος.  
 7. νόμιμον. 8. μέλλω. 9. δίδωμι. 10. δίχη. 11. δείδω. 12. ἀφίημι. 13.  
 ἄθαπτος. 14. δύναμαι. 15. ζάω. 16. ἀρεστός. 17. ποτέ. 18. πόθεν. 19.  
 κατέχω. 20. κλέος. 21. ἦ. 22. τίθημι. 23. ἀντάδελφος. 24. τάφος.

LATIN EXAMINATION, HELD JUNE 8, 1872.

SUBJECT: "*The Andria of Terence.*"

Translate:

(A) *Si.* Non dubuimst, quin uxorem nolit filius:  
 Ita Davum modo timere sensi, ubi nuptias  
 Futuras esse audivit. Sed ipse exit foras.  
*Da.* Mirabar, hoc si sic abiret: et eri semper lenitas  
 Verebar quorsum evaderet:  
 Qui postquam audierat non datum iri filio uxorem suo,  
 Numquam quoiquam nostrum verbum fecit neque id ægre tulit.  
*Si.* At nunc faciet, neque, ut opinor, sine tuo magno malo.  
*Da.* Id voluit, nos sic nec opinantis duci falso gaudio,  
 Sperantis jam amoto metu, interea oscitantis opprimi,  
 Ut ne esset spatium cogitandi ad disturbandas nuptias:  
 Astute. *Si.* Carnutex quæ loquitur. *Da.* Erus est neque  
 provideram.  
*Si.* Dave. *Da.* Hem, quid est? *Si.* Eho dum ad me.  
*Da.* Quid hic vult? *Si.* Quid ais? *Da.* Qua de re? *Si.* Rogas?  
 Meum gnatum rumor est amare. *Da.* Id populus curat scilicet.  
*Si.* Hocine agis an non? *Da.* Ego verò istuc.  
*Si.* Sed nunc ea me exquirere  
 Iniqui patris est: nam quod antehac fecit, nil ad me attinet.  
 Dum tempus ad eam rem tulit, sivi animum ut expleret suum:  
 Nunc hic dies aliam vitam defert, alios mores postulat.

(B) *Ch.* Quid ais, Byrria? Daturne illa Pamphilo hodie nuptum?  
*By.* Sic est.  
*Ch.* Qui scis? *By.* Apud forum modo e Davo audiui. *Ch.* Ei  
 misero mihi.  
 Ut animus in spe atque in timore usque antehac attentus fuit,  
 Ita, postquam adempta spes est, lassus cura confectus stupet.

*By.* Quæso edepol, Charine, quoniam non potest id fieri quod vis,

Id velis quod possis. *Ch.* Nil volo aliud nisi Philumena.

*By.* Ah,

Quanto satiust te id dare operam, qui istum amorem ex animo animo amoveas,

Quam id loqui, quo magis libido frustra incendatur tua.

*Ch.* Facile omnes, quum valemus, recta consilia ægrotis damus.

Tu si hic sis, aliter sentias. *By.* Age, age, ut lubet. *Ch.* Sed Pamphilum

Video. Omnia experiri certumst prius quam pereo. *By.* Quid hic agit?

*Ch.* Ipsum hunc orabo, huic supplicabo, amorem huic narrabo meum:

Credo impetrabo, ut aliquot saltem nuptus prodat dies:

Interea fiet aliquid, spero. *By.* Id "aliquid" nil est.

(C) *Cr.* In hac habitasse platea dictumst Chrysidem,

Quæ sese inhoneste optavit parere hic ditias

Potius quam in patria honeste pauper viveret:

Ejus morte ea ad me lege redierunt bona.

Sed quos perconter video, Salvete. *My.* Obsecro,

Quem video? Estne hic Crito sobrinus Chrysidis?

Is est. *Cr.* O Mysis, salve. *My.* Salvus sis, Crito.

*Cr.* Itan Chrysis? Hem. *My.* Nos quidem pol miseras perdidit.

*Cr.* Quid vos? Quo pacto hic? Satine recte? *My.* Nosne? Sic

Ut quimus, aiunt, quando ut volumus non licet.

*Cr.* Quid Glycerium? Jam hic suos parentis repperit?

*My.* Utinam. *Cr.* An nondum etiam. Haud auspicato huc me attuli.

In Extract (A):

1. Enumerate and classify the subjunctives employed.
2. Give the construction of the words *lenitas*, *opinantis*, *astute*, *istuc*.
3. Give the etymology of *dubium*, and the composition of *nolit* and *carnufex*.
4. To whom do *ipse* in the third line and *tuo* in the eighth line refer?

5. State the difference in meaning between *timere*, *metuere* and *vereri*.
6. Describe the character of *Dævus*.

In Extract (B):

1. Describe the Latin forms of condition and conclusion.
2. Give the construction of *nuptum* and *experiri*.
3. Give the degrees of comparison of *magis* and *prius*.
4. State the difference between the interrogative pronouns *quis* and *qui*, and between the demonstrative pronouns *hic*, *ille* and *iste*.
5. What relation is denoted by the clause, *Quoniam non potest id fieri quod vis*, and why is the indicative used instead of the subjunctive?
6. Write an explanatory note on *apud forum*.
7. State difference between *animus* and *mens*.

In Extract (C):

1. Convert *in hac habitasse platea Chrysidem* into the oratio recta.
2. Enumerate and describe the Latin interrogative particles.
3. What Latin words are needed to supply the ellipses in the sentences, *Itan Chryses?* and *Quid Glycerium?*
4. Write down the full forms of the following: *dictumst*, *itan* and *satine*.
5. What is the construction of *vos* in the ninth line?
6. State the geographical position of Andros.
7. State the Roman law of inheritance alluded to in the fourth line.
8. State the difference in meaning between the Latin word *pauper* and the English word *pauper*, and distinguish between *pau-pertas*, *inopia* and *egestas*.
9. Compare slavery among the Romans with modern slavery, referring to the extent of Roman slavery, the character of the slaves and their relation to their masters.

(A) Give a brief account of the life of Terence.

(B) Give a comparative estimate of Terence and Plautus as writers of Comedy.

(C) Tell briefly the story of the *Andria*.

(D) Describe the relation of Roman and Greek Comedy.

Translate into Latin :

- (A) Is this the duty of a father? In the name of the gods, what is this if it be not contumely? He had decided to give me a wife to-day. Ought he not to have consulted me beforehand? Ought he not at least to have apprised me of it beforehand? And Chremes, who had declined to give me his daughter to wife, why has he changed his mind?
- (B) I beseech thee, Chremes, by the gods and by our friendship which began in childhood and has grown with age, and by thine only girl and by my son, whose salvation is in thy power alone, help me in this thing and solemnize the proposed marriage.

#### 10. EXAMINATIONS.

1. Entrance Examinations are held June 17th and 18th, and September 11th and 12th. The requisites for admission to Freshmen are the Grammar School Course, or its equivalent.

2. Progressive Examinations of all the Classes are held at the close of each term on the studies of the term. Absentees must make up and be examined before they are in full standing. For failure, the student may be conditioned or sent back.

3. Graduating Examinations of the Seniors are held four weeks before Commencement, for Degrees.

The Progressive and Graduating Examinations are before a committee of the Faculty and the public.

#### 11. MODE OF INSTRUCTION.

Three recitations daily, by lectures and oral instruction on the part of the Professor, and by recitations, blackboard exercises, essays and written reports on special subjects on the part of the pupil, without text-books when the subject allows. The pupil is thrown upon his own resources in the recitation, and is required to take up his theme, and give his exposition of it. Omissions or deficiencies, if any, are called out by question and answer.

#### 12. THE DISCIPLINE

Is administered by the President and Faculty. But each Professor grades daily the standing of the student in scholarship, and marks known delinquencies in scholarship, morals and general conduct.

## 13. GRATUITOUS AID

Was afforded the needy. By the University, \$3,141; by the Ed. Soc., \$8,933; in all \$12,074.

## 14. STATUTES AND BY-LAWS.

As last year.

## 15. DESCRIPTION AND VALUE OF BUILDINGS, &amp;c.

Hall of Alumni and Friends, 107x73.....	\$30,000 00
President's House and ten acres .....	8,000 00
Fifty-five acres of land .....	7,500 00
Two College Buildings—East College and West College,	25,000 00
University Boarding Hall, Farm and Professors' House,	15,000 00
Library—10,000 volumes in good condition.....	12,000 00
College Museum and Museum of Foreign Curiosities..	12,000 00
Apparatus—Chemical and Philosophical.....	3,000 00
Fixed and unproductive capital.....	<u>\$112,500 00</u>

## 16. OTHER COLLEGE PROPERTY.

Prize Funds .....	\$3,500 00
Scholarship Funds.....	9,800 00
Library Funds.....	5,000 00
Colgate Improvement Fund .....	11,000 00
Trover Educational Fund.....	40,000 00
Coray Professorship Fund.....	6,000 00
Bleecker Professorship Fund .....	15,000 00
Trevor & Colgate Professorship Fund .....	50,000 00
Colgate Presidential Fund .....	30,000 00
General Endowment Funds .....	100,330 00
	<u>\$270,630 00</u>

Invested as follows:

Mortgages .....	\$128,430 00
Stocks.....	123,200 00
Bonds.....	8,500 00
Personal Bonds.....	6,000 00
Notes .....	4,500 00
Total cash value .....	<u>\$270,630 00</u>



Value of College buildings and grounds .....	\$85,500 00
Value of Library and Apparatus and Museum .....	27,000 00
Value of other College property .....	270,630 00
Revenue of last Collegiate year .....	21,522 46
Expenditure last Collegiate year .....	23,092 46
Amount of debts .....	None.

## 21. PRICE OF TUITION.

College tuition, \$10; per year .....	\$30
Room rent, \$3 per term; per year .....	9
Incidental expense bill, \$3 per term; per year .....	9
Board from \$2.75 to \$4.50 per week; per year .....	120

## 22. REMARKS.

1. The Commencement having been changed from the first Wednesday of August to the 19th day of June, makes the present financial year, as above reported, about seven weeks shorter than usual. Consequently, the revenue and expenditure accounts are less than a year's report.

2. Rev. George W. Eaton, D. D., LL. D., the former President and Professor of Moral and Intellectual Philosophy, was at the close of the previous year released from all College duties, and appointed Emeritus Professor of Theology in the Theological Seminary. His health, however, continued to decline, and he died on the third day of August, 1872, aged 68 years and one month. He had been 39 years connected with the University, occupying the various chairs of Mathematics, Natural Philosophy, History, Intellectual and Moral Philosophy, and Theology. His name is well known as that of a man of broad and generous culture, and as a popular educator. His obituary notice has already been transmitted to the Board of Regents, and will appear in their report.

## 23. CONCLUSION.

The above report is made under a standing rule, by which the reports of the Faculty and of the Treasurer, as made to the corporation of the University, are to be the report of the Board to the Regents.

Respectfully submitted.

[L. S.]

W. R. BROOKS & C.

P. B. SPEAR, *Treasurer.*

## VII. ST. JOHN'S COLLEGE, FORDHAM, WESTCHESTER COUNTY.

*To the Regents of the University of the State of New York:*

The Trustees of St. John's College, Fordham, N. Y., in compliance with a requisition of the Regents of the University, submit the following report for the last Collegiate year, ending on the 26th day of June, 1872, being the day of the annual commencement, containing a just and true statement of facts, showing the progress and condition of said College, during and at the close of said year, in respect to the several subject-matters following, viz.:

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in said College during said year, as established by the Trustees, were the following:

1. Evidences of Religion.
2. Ethics, Civil, Political and International Law.
3. Logic and Metaphysics.
4. Natural Philosophy and Higher Mathematics.
5. Chemistry and Natural History.
6. Rhetoric and General Literature.
7. Belles Lettres.
8. English Literature.
9. Geometry and Algebra.
10. Classics.
11. History.

### 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The following is a list of the Trustees of the College, with their respective places of residence:

Very Rev. William Starrs, D. D., V. G., 263 Mulberry st., N. York.

Very Rev. J. Bapst, 49 West Fifteenth street, New York.

Rev. James Perron, " "

Rev. I. Daubresse, " "

Rev. H. Hudon, " "

Rev. A. Thebaud, St. Joseph's church, Troy, N. Y.

Rev. Joseph Shea, Fordham, N. Y.

Rev. J. Fitzpatrick, " "

Rev. P. Tissot, S. J., " "

The last meeting was held on the 12th day of October, 1871, at which the following Trustees were present: Revs. J. Bapst, J. Fitzpatrick, P. Tissot, I. Daubresse, A. Theband, J. Perron and J. Shea. That was the only meeting held during the year.

The Faculty of said College, including all persons charged with the duty of giving instruction therein during said year, consisted of a President, Vice-President, ten Professors for the undergraduate course and seven for the other courses—in all twenty Professors.

The other officers of said College, charged with duties therein other than those of public instruction during said year, were a Treasurer, Librarian, Chaplain, nine Assistant Disciplinarians, three Professors of Music and one Professor of Drawing.

The names of the several persons holding offices or places in said College during said year, with the offices or places held by them respectively, were as follows:

Rev. J. Shea, S. J., President, Prefect of Studies.

Rev. J. Fitzpatrick, S. J., Vice-President, Chief Disciplinarian, Assistant Professor of Mathematics and Astronomy.

Rev. A. Pelletier, S. J., Chaplain.

Rev. P. Tissot, S. J., Treasurer.

Rev. P. O. Racicot, S. J., Professor of Mental and Moral Philosophy, Post-graduate Course.

Rev. E. Doucet, S. J., Professor of Mental and Moral Philosophy, Graduating Class.

Rev. L. Jouin, S. J., Professor of Physics, Chemistry, Geology and Higher Mathematics, Librarian.

Rev. Whyte, S. J., Professor of Evidences of Religion and History, Moderator of the Historical Association.

William J. Doherty, S. J., Professor of Rhetoric, President of Debating Society, Director of Music.

Th. J. Campbell, S. J., Professor of Belles Lettres.

P. A. Halpin, S. J., Professor of Classics and Algebra.

D. C. Plante, S. J., Professor of Second Grammar Class and Arithmetic.

L. E. Arpin, S. J., Professor of Third Grammar Class, Arithmetic and Physiology.

J. J. McCarthy, S. J., Professor of Special Latin Class.

N. N. McKinnon, S. J., Professor of the Third English Class and Book-keeping.

Ch. J. O'Connor, S. J., Professor of the Second English Class and Book-keeping.

J. O'Rourke, A. M., Professor of the Second English Class, Second Section, and Arithmetic. Salary, \$300.

Rev. P. McQuaid, S. J., Professor of the First English Class and Arithmetic.

P. Donnelly, Assistant Professor of Mathematics.

M. Enright, Professor of Penmanship, Tutor in the Commercial Course.

Mace, S. J., Professor of Music.

Urso, Professor of Music.

F. Simon, Professor of Music, Director of the College Choir.

J. Bathgate, M. D., Attending Physician.

Rev. N. Hanrahan, S. J., Assistant Treas., Assistant Disciplinarian.

P. Cooney, S. J., “

A. Gerhard, S. J., Professor of German, “

H. Kavanagh, S. J., “

Ch. N. Bulger, “

G. J. Haben, “

J. McGory, “

M. Montgomery, “

J. Wellworth, “

About \$800 were given as salary. Those who have the direction of the College serve it gratis.

### 3. NUMBER OF STUDENTS.

The whole number of students, undergraduates in said College during said year, was 254.

Of this number, forty-two left during the year; some because they could no longer pay their bills; others on account of ill health. There remained at the close of the year 212.

The number of the graduates at the annual Commencement, held on the 26th day of June, 1872, was thirty.

The whole number of graduates of the College is 329.

The graduates of the past year, as far as we know, embraced liberal professions.

The maximum age of undergraduates was thirty; the minimum twelve. Average age of undergraduates, seventeen.

The maximum age of the graduates was thirty-two; minimum, eighteen past. Average, twenty-two.

4. CLASSIFICATION OF STUDENTS.

The students who were undergraduates in said College, during said year, were classified as follows, viz :

Seniors .....	25
Juniors.....	12
Sophomores.....	24
Freshmen.....	17
	<hr/>
	78
	<hr/>

The other students were divided among the Grammar and English Courses.

5. COMMENCEMENT EXERCISES.

The following is a copy of the scheme of the last commencement :

OVERTURE.	
Discourse—Philosophy in Education.....	Ph. A. Meister.
MUSIC.	
Discourse—Rationalism in Ethics.....	Alpin J. Cameron.
MUSIC.	
Discourse—Faith and Science.....	William Ahearn.
MUSIC.	
Discourse—Pauperism....	Edmund A. Chapoton.
MUSIC.	
Discourse—Materialism in Art—Valedictory .....	Morgan J. O'Brien.
MUSIC.	
<i>Conferring of Degrees.</i>	
Address to the Graduates.....	Jos. J. Marrin, A. M.
MUSIC.	
<i>Distribution of Prizes.</i>	

The Degrees conferred were as follows :

1. *Degrees in Course.* The Degree of A. B. was conferred on : Edmund A. Chapoton, Detroit, Mich.; Edmund Slattery, Rondout, N. Y.; Alpin J. Cameron, Ridgewood, N. J.; Morgan J. O'Brien, New York; James F. Carey, Brooklyn, N. Y.; John J. Brady, Fordham, N. Y.; William Ahearn, Cork, Ireland; John B. O'Hare, Stapleton, Staten Island; George J. Haben, Cortland, N. Y.; Francis P. Owens, Cincinnati, Ohio; Michael F. Dooley,

Hartford, Conn.; Philip A. Meister, Sing Sing, N. Y.; William H. Hurst, New York; Michael J. Quinn, Fordham, N. Y.; John C. O'Reilly, Rondout, N. Y.; Michael J. Wallace, Albany, N. Y.; James McGary, Shortsville, N. Y.; Alexander Villavicencio, Pichota, Ecuador; Peter J. Tracy, New York; Arthur J. Marrin, Albany, N. Y.; Michael Montgomery, Longford, Ireland; John Gleises, New York; John E. McGlynn, Boston, Mass.; Charles Isherwood, New York; Richard Graham Frost, St. Louis, Mo.

The Degree of A. M. was conferred on: Samuel A. Gleavy, A. B., Brooklyn, L. I.; John C. Keveney, A. B., Detroit, Mich.; Jules A. Le Moine, A. B., Quebec, Canada; William J. Ludden, A. B., Binghamton, N. Y.; Joseph P. Costin, A. B., Halifax, N. S.

2. *Honorary Degrees.* None.

#### 6. COLLEGE TERMS OR SESSIONS.

The terms or sessions for studies in said College, during said year, were the following:

The first term began on the first Wednesday in September, and ended January 31.

The second term began February 1, and ended on the last Wednesday in June. This arrangement is now permanent in the College.

The following is a copy of the Calendar for the next Collegiate year:

Ordinary recreations.—All day Thursday from September until November 1st, and from May 1st until the close of the year. Every Tuesday and Thursday afternoon from November 1st until May 1st or Easter Sunday.

Vacation.—First, from December 21st until January 3d; second, from the last Wednesday in June until the first Wednesday in September. There are also some celebrations during the year, such as Washington's Birthday, &c.

#### 7. SUBJECTS OR COURSE OF STUDY.

The undergraduate course of study in each class in said College, during said year, was as follows:

##### *Classical Course.—I. Grammar Classes.*

1. Third Grammar Class. Latin—Elements: Bullions' and Morris' Latin Grammar, Viri Romæ.

Greek—The elements of this language are taught in the second term.

English—Bullions' Grammar, Exercises, Spelling, Defining, Reading, Memory, Recitations.

French—Keetel's New Method.

History—Short History of the United States.

Geography—Cornell's Geography.

Arithmetic—Davies' University Arithmetic.

Writing—Lessons.

Christian Doctrine—Literal Study of a small Catechism, with Explanations by the Professor.

2. Second Grammar Class. Latin—Bullions' Grammar continued, Bullions' Exercises, Nepos, Phædrus, 'Select Letters of Cicero.

Greek—Kendrick's Bullions' Greek Grammar, Bullions' Greek Exercises, Kendrick's Greek Ollendorf.

English—Bullions' Grammar, Metropolitan Fourth Reader, Exercises.

French—Keetel's New Method (continued), Exercises.

History—Fredet's Ancient History.

Geography—Cornell's Intermediate Geography.

Writing—Lessons.

Arithmetic—Davies' University (continued).

Christian Doctrine—Literal Study of Catechism, Explanations by the Professor.

3. First Grammar Class. Latin—Grammar (continued), Bullions' Exercises, Ovid's Metamorphoses, Tristia, Virgil's Bucolics, Georgics, Cæsar's Commentaries, Sallust.

Greek—Bullions' Grammar (continued), Greek Ollendorf.

Lucian's Dialogues, Xenophon's Anabasis.

English—Grammar (continued), Murray's Exercises, Reading, Elocution, Memory.

French—Keetel's Method (continued), Telemachus, Exercises.

History—Fredet's Ancient History (continued).

Geography—Cornell's Geography.

Mythology—Irving's Catechism of Mythology.

Arithmetic—Davies' Metrical System.

Book-keeping—Bryant & Stratton's.

Writing—Lessons.

Christian Doctrine—Catechism, Explanation by the Professor.

Mathematics — Davies' Trigonometry and Church's Analytical Geometry.

Chemistry—Roscoe's Elementary Chemistry.

Religious Instruction—Weekly lectures on the Evidences of Religion.

7. Philosophy. Mental Philosophy.—First term: Logic and Ontology. Second term: Cosmology, Psychology and Theodicy. The lectures are given in Latin. The students are required to speak Latin, and defend their theses every week in that language. Such defense is often public before the Faculty.

Natural Philosophy—Snell's Olmsted.

Mathematics—Church's Calculus.

Mechanics—Peck's.

Astronomy—Loomis' Treatise on Astronomy.

Elocution—Lessons, Debating Society.

Religious Instructions—Weekly lectures on the Evidences of Religion.

These four undergraduate classes correspond to the Senior, Junior, Sophomore and Freshman Classes of other Colleges.

### III. *Post-Graduate Department.*

First term: Ethics.

Second term: Civil, Political and International Law. In this, as well as in the first year of Philosophy, the students are obliged to defend their theses, both in class and before the Faculty, against some of their own number, or against Professors and others appointed to attack them. Such discussions are usually carried on in Latin. The members of this class are required to write Dissertations and Essays in English, on the various matters of their course. At the end of the second term, essays on three different subjects, already treated in class, are written, and to the best is awarded a gold medal worth fifty dollars.

Various branches of Natural Science and the Modern Languages can be studied in this course. To this year is also reserved the History of Philosophy.

### COMMERCIAL COURSE.

#### *First Class.*

English—Spelling, Reading, Grammar.

History—Short History of the United States.



Chemistry—Roscoe's Elementary Chemistry.

Religious Instruction—Evidences of Religion.

*Sixth Class.*

Philosophy—Mental and Moral Philosophy.

English—General History of Literature, Debating Society.

Natural Philosophy—Snell's Olmsted, Geology, Physiology.

Mathematics—Calculus.

Astronomy—Loomis' Treatise on Astronomy.

History—Lectures.

Religious Instruction—Evidences of Religion.

Students of this course can obtain the Degree of Bachelor of Sciences, provided they pass satisfactorily the required examination. They can also study German, Spanish and Drawing, but these branches form extra charges. Besides, there are in the College some supplementary classes, viz. :

1. A Special Latin Class, which is intended to advance young men who come too late in the year, or are too old to go into the ordinary grammar classes. The members of this class receive no other prize than that of promotion to the regular class, which their success in the January or June examination entitles them to enter.

2. A Preparatory Class, in which young boys are fitted to enter either of the College courses of study.

3. A Special Class for Spaniards and others, who do not know any or enough of English to allow them to take rank in the ordinary classes.

8. EXERCISES.

Besides the rhetorical exercises belonging to the Juniors and Sophomores, there are weekly declamations and compositions in all the classes.

At the beginning of every month, the rank and merit of each student is publicly proclaimed before the assembled faculty and students.

Every Friday there is a written competition in all the classes except the Senior. The copies are examined, and rank is assigned according to merit.

Declamation is taught in all the classes on every Saturday afternoon.

Class exhibitions, dramatic and literary entertainments, are frequently given during the year.

The Debating and Historical Societies afford abundant literary exercises to the Juniors and Seniors.

There are two reading rooms for the students, in which are to be found several periodicals, magazines and newspapers, home and foreign.

The students' library, which increases every year, contains nearly 4,000 valuable works on literature, science and history.

Every Sunday a sermon is preached in the College chapel before all the students.

The students are separated into three divisions, according to their age and physical development; and, as the College grounds are large and favorably situated, every division has its own gymnasium, and ample scope for bathing, skating and outdoor exercises of every kind.

#### 9. EXHIBITIONS AND PRIZE CONTESTS.

There are only two public exhibitions during the year, namely: one in February or later, as the season suits, and the other on Commencement day.

As yet, no prize has been founded in this College. All the prizes which are awarded at Commencement time, and which consist of gold and silver medals and books, are given by the College, with the exception of the gold medal annually bestowed upon the writer of the best Biographical Essay. This medal has hitherto always been given by some friend of the College. Mr. Edmund Chapoton, of Detroit, Michigan, was the successful competitor at the last Commencement.

#### 10. EXAMINATIONS.

Every new comer, on entering the College, is examined and then sent to the class for which he is judged to be fit.

There are two general examinations during the year, namely, one before the close of each term.

These examinations are oral. Every student must, if he desires promotion, answer satisfactorily on all the branches taught in his class. The examinations are carried on by boards, before which only one student appears at a time. Failure before these boards sends the student, at the January examination, to the class immediately below that in which he fails, and in June it debars him from promotion. Candidates for graduation are always refused the usual diploma when they do not satisfy the examiners. No student who fails is admitted to another examination within the same year.

**11. MODE OF INSTRUCTION.**

Text-books are used for all the branches of study, except in public lectures on History and on the Evidences of Religion. However, in these two branches the students are required to keep notes, to answer at recitations, write competitive papers, and undergo examination twice during the year. There is a great deal of writing in the shape of themes, literary and oratorical analysis, parsing and translating the various authors used in the classes. All the students are constantly interrogated on the subjects which they study.

**12. DISCIPLINE.**

The general rules of discipline require the students to know the rules of the College, which are read and explained publicly twice a year—never to leave the College bounds without permission, and to respect and obey all officers who preside over them.

Appeals to honor and conscience, and the influence of religion, are found to be the most efficient disciplinarians.

The punishment usually inflicted for the short-comings of the student consists in depriving him of some of his recreation, imposing extraordinary literary labor, public reprimands, etc. Persistent idlers, and those who repeatedly refuse to obey, are sent away.

The common causes of dismissal are protracted idleness and bad conduct, that is to say, drunkenness, immorality, refusal to obey, etc.

**13. GRATUITOUS AID.**

Hitherto no fund has been established for the education of indigent students; still the College perform every year some acts of charity in this line.

**14. STATUTES, OR BY-LAWS OF THE COLLEGE.**

The Board has adopted no statutes or by-laws. It leaves to the Faculty the enactment and enforcement of such disciplinary rules as they judge requisite for the good order of the College.

**15. DESCRIPTION AND VALUE OF COLLEGE BUILDINGS, ETC.**

As no change whatever has been made in the College buildings within the past three years, we suppose it is unnecessary to repeat what was said in former reports.

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## 16. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

The only change under this head, for the past ten years, is a house, which was built during the last year at a cost of between \$3,000 and \$4,000. It was put up, in order to save a few lots belonging to the College.

## 17. DEBTS.

The debt, which last year was \$125,000, has been reduced to \$121,247.32.

## 18. REVENUE.

The College possesses no other revenue than what results from the fees of the students for board and tuition, and the products of the farm and garden.

Received for board and tuition.....	\$64,151 68
Received from farm and garden.....	8,000 00
	<hr/>
	\$72,151 68
	<hr/>

## 19. EXPENDITURES.

Taxes .....	\$1,249 00
Interest .....	7,500 00
Fuel .....	3,500 00
Insurance and repairs .....	3,000 00
Board of students.....	35,000 00
Salaries and expenses of Faculty.....	14,150 00
New construction.....	4,000 00
	<hr/>
	\$68,399 00
	<hr/>

## 20. TABULAR STATEMENT.

Number of courses of study.....	3
Number of Professors and Tutors.....	17
Number of Collegiate Students.....	254
Graduates at last Commencement, in course .....	30
Graduates, honorary .....	None.
Whole number of Graduates .....	329
Value of College buildings and grounds, at least .....	\$500,000 00
Value of library and apparatus, about .....	28,000 00
Value of other College property .....	None.
Revenue for last Collegiate year .....	72,151 68
Expenditure for last Collegiate year .....	68,399 00
Amount of debts of the College .....	121,247 32
	<hr/>

## 21. TUITION.

Day scholars .....	\$60 00
Boarders, for board and tuition .....	300 00
Washing and bedding .....	30 00
Entrance fee .....	10 00
Medical attendance .....	5 00
Use of chemical and philosophical apparatus .....	5 00

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## 22. REMARKS.

Nothing.

## 23. CLOSE OF THE REPORT.

The above report was made by the Trustees at a regular meeting of their Board, held at St. John's College, Fordham, N. Y., on October 30th, 1872, at which time they authorized the Chairman and Secretary of their Board and the Treasurer of the College to have the above report transcribed, to sign it and affix thereto the seal of the Board, and forward the same to the Regents of the University.

JOSEPH SHEA, S. J., *Chairman.*

JOHN FITZPATRICK, *Secretary.*

PETER TISSOT, *Treasurer.*

[L. S.]

**VIII. GENESEE COLLEGE, LIMA, LIVINGSTON COUNTY.**

[College not in operation during the last year, and no report furnished.]

## IX. UNIVERSITY OF ROCHESTER, ROCHESTER, MONROE COUNTY.

*To the Regents of the University of the State of New York:*

The Trustees of the University of Rochester, in compliance with the requisitions of the Regents of the University, submit the following report for the last Collegiate year, ending July 3d, 1872, being the day of annual Commencement, containing a just and true statement of facts, showing the progress and condition of said University during and at the close of said year, in respect to the several subject-matters following, viz.:

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in said University during said year, as established by the Trustees, were the following:

1. Intellectual and Moral Philosophy.
2. Greek Language and Literature.
3. Mathematics and Natural Philosophy.
4. Natural Sciences.
5. Chemistry.
6. Modern Languages and Literature.
7. Rhetoric, Logic and English Literature.
8. Mathematics.
9. Latin Language and Literature.

### 2. TRUSTEES, FACULTY AND OTHER OFFICERS.

#### *Trustees.*

Hon. William Kelly, President, Rhinebeck.

Hon. Ira Harris, LL. D., Chancellor, Albany.

William N. Sage, Secretary and Treasurer, Rochester.

Smith Sheldon, New York.

Rev. William R. Williams, D. D., LL. D., New York.

Roswell S. Burrows, Albion.

Rawson Harmon, Wheatland.

Hon. Elijah F. Smith, Rochester.

Elon Huntington, “

Gideon W. Burbank, “

James E. Southworth, Brooklyn.

Gen. John F. Rathbone, Albany.

Lewis Roberts, Tarrytown.

Henry W. Dean, M. D., Rochester.

Daniel C. Munro, Elbridge.

Gen. Marsena R. Patrick, Manlius.

Rev. Velona R. Hotchkiss, D. D., Buffalo.

Rev. Edward Bright, D. D., Yonkers.

Edwin O. Sage, Rochester.

John B. Trevor, Yonkers.

Hiram Sibley, Rochester.

William A. Reynolds, Rochester.

Martin W. Cooke, “

Francis A. Macomber, “

[Hon. William Kelly and William A. Reynolds died during the year.]

The last annual meeting of the Board was held on the second day of July, 1872, at which the following Trustees were present, viz. :

William N. Sage, Smith Sheldon, Roswell S. Burrows, Rawson Harmon, Hon. Elijah F. Smith, Elon Huntington, Gideon W. Burbank, Henry W. Dean, M. D., Daniel C. Munro, Rev. Edward Bright, D. D., Edwin O. Sage, Hiram Sibley, Martin W. Cooke, Francis A. Macomber.

No other meetings were held during the year.

### *Faculty.*

The Faculty of said University, including all persons charged with the duty of giving instruction therein during said year, consisted of a President and eight Professors.

The other officers or servants of said University, charged with duties therein other than those of public instruction, during said year, were a Secretary and Treasurer, Librarian, Financial Secretary and Janitor.

Martin B. Anderson, LL. D., President, and Professor of Intellectual and Moral Philosophy.

Asahel C. Kendrick, D. D., Professor of the Greek Language and Literature.

Isaac F. Quinby, LL. D., Professor of Mathematics and Natural Philosophy.

Henry A. Ward, A. M., Professor of the Natural Sciences.



Samuel A. Lattimore, A. M., Professor of Chemistry.

Albert H. Mixer, A. M., Professor of the Modern Languages and Literature.

Joseph H. Gilmore, A. M., Professor of Rhetoric, Logic and English Literature.

Otis H. Robinson, A. M., Professor of Mathematics.

A. Judson Sage, A. M., Professor of the Latin Language and Literature.

Otis H. Robinson, A. M., Librarian.

William N. Sage, A. M., Secretary and Treasurer.

Joseph H. Gilmore, A. M., Financial Secretary.

Elijah Withall, Janitor.

### 3. NUMBER OF STUDENTS.

The whole number of students, undergraduates, in said University during said year was .....	134
Honorably dismissed .....	1
Deceased .....	1
Left from inability to maintain their standing, or from illness and by permission.....	5
Remaining at the close of the year.....	127
Graduates at last Commencement .....	19
Students at the date of this report (Jan. 1, 1873).....	157
Whole number of graduates.....	487

There were no students under fourteen years of age. The average age of the graduating class was twenty-one.

### 4. CLASSIFICATION OF STUDENTS.

The students of said University, during the past year, were classed as follows:

Seniors .....	20
Juniors .....	29
Sophomores .....	35
Freshmen .....	43
Special students in Analytical Chemistry.....	7
	<hr/>
	134

## 5. COMMENCEMENT EXERCISES.

The following is a copy of the scheme of last Commencement :

The Moral Responsibility of the Newspaper,

George Howard Thornton, Watertown.

The Conqueror and the Inventor.....Lewis Hall Morey, Livonia.

English Estimates of America. ....David Fay Stewart, York.

Scientific Method Universal in its Application. ....Andrew Van Dyke, Rochester.

Expression of National Sentiment in Song.....Ivan Powers, Cuba.

## MUSIC.

Moliere.....Frank Sheldon Fosdick, Westfield.

American Sympathy with Russia.....George Frederick Bausum, Fredonia.

Conventional Morality.....Isaiah Borroughs Hudnut, Middleport.

Bismarck .....Schuyler Colfax Baldwin, Troy.

Whitewashing .....Edward Phelon Hart, Rochester.

## MUSIC.

The Market Price of Brains.....Alfred Augustus Newhall, Jr., Woburn, Mass.

The Conditions of National Growth.....Adelbert Pierson Little, Rochester.

The Cosmopolitan Character of the Jews.....Isaac Wile, Rochester.

Who Reads an American Book ?.....Charles Mortimer Warren, Chicago, Ill.

The Permanence of Democratic Institutions.....James Monroe Hudnut, Rochester.

## MUSIC.

The Benefits of Separation.....Theophilus Sproull, Alleghany, Pa.

Spasmodic Virtue.....William Theodore Mills, Rutland, Vt.

The Moral Element in Art.....George Hamilton Perkins, Rochester.

The Barbarism of Civilization.....Solomon Wile, Rochester.

The degrees conferred were as follows:

*A. M. in Course*—Grove Karl Gilbert, '62; Albert Tennyson Barrett, '69; Edward Patterson Glass, '69; Freeman A. Green, '69; Albert Cable Hale, '69; Horace Fidelio Kendall, '69; Albert W. Morehouse, '64; Zachary Philo Taylor, '64.

*A. B. and A. M. in Course*—Sylvanus A. Ellis, Superintendent of Schools for the city of Rochester.

*Honorary A. M.*—Marcus F. Cummings, of Albany.

*Doctors of Divinity*—John B. Brackett, of Brooklyn, E. D.; George W. Clark, of Ballston; A. Judson Sage, of Hartford; J. L. M. Curry, of Richmond.

## 6. COLLEGE TERMS OR SESSIONS.

The terms or sessions for study for said year were as follows :

First term, from September 13 ..... 15 weeks.

Second term, from January 4 ..... 12 weeks.

Third term, from April 4..... 12 weeks.

Annual Commencement, July 3, 1872.

The following is a copy of the Calendar for 1872-3 :

December	23.....	First term ends.
January	3.....	Second term begins.
January	9.....	Day of Prayer for Colleges.
March	26.....	Second term ends.
April	3.....	Third term begins.
June	6.....	Class day.
June	29.....	Sermon before the Christian Association.
June	30 (evening) ..	Sophomore Prize Declamations.
June	30.....	Examinations for Admission.
July	1 (evening) ..	Oration and Poem before the Alumni.
July	2.....	Commencement.
September	17.....	Examinations for Admission.
September	18.....	First term begins.
December	23.....	First term ends.

#### 7. SUBJECTS OR COURSES OF STUDY.

The plan of instruction is so adjusted that two courses of systematic study are open to the students, one being the usual Classical and Scientific Course, and the other a Scientific Course, in which Modern Languages take a more prominent place, and special attention is given to the history of the Sciences, while a part of the Latin of the Classical Course and all of the Greek are omitted. The regular course for all students extends through four years, at the end of which time those who have passed a good examination in the prescribed studies are admitted to a degree: those who have pursued the Classical Course, to the degree of "Bachelor of Arts," and those who have pursued the Scientific Course, to that of "Bachelor of Sciences."

The course of study in the several classes the past year was :

##### *Freshman Class.*

*First Term.* Greek daily, reading the fourth book of the Anabasis, and going through Kendrick's Ollendorf; Algebra daily (Robinson's University); Latin daily, reading selections from the first, second and twenty-first books of Livy, and Allan's Latin Prose Composition.

*Second Term.* Greek daily, reading the first Olynthiac, and the first and second Philippics of Demosthenes; Mathematics daily, completing Robinson's Algebra, and the fourth, fifth and sixth books of Robinson's Geometry; English Grammar and Composition daily, taught by lectures.

*Third Term.* Greek daily, reading selections from the first and fourth books of Homer; Mathematics daily, completing Geometry and Plane and Spherical Trigonometry; Latin daily, reading selections from the twenty-first and twenty-second books of Livy.

To this should be added an exercise in Elocution on Saturdays throughout the year.

### *Sophomore Class.*

*First Term.* Mathematics daily, Spherical Trigonometry, Surveying and Navigation, and Analytical Geometry to the Hyperbola; French daily, Fasquelle's Course with Magill's Reader; Latin daily, reading Satires of Horace and Juvenal.

*Second Term.* German daily, Woodbury's New Method and German Reader, with exercises; Greek daily, reading Demosthenes de Corona; Mathematics daily, completing Analytical Geometry, and nearly completing Loomis' Differential and Integral Calculus.

*Third Term.* German daily, Woodbury's Reader and colloquial and written exercises; Latin daily, selections from Quintilian's Institutes of Oratory; French daily, Fasquelle and Magill completed, and French poetry, with exercises.

On Saturdays, this class had a course of lectures on Mediæval History, throughout the year; and also a weekly exercise on the Origin and History of the English Language, and readings from Shakespeare.

### *Junior Class.*

*First Term.* Logic daily, by lecture, with reference to Thomson, Mill, etc., with oral dissertations in English Literature; Greek daily, reading the Electra of Sophocles; Ganot's Physics (French text) daily; a lecture on Saturdays on Chemical Physics.

*Second Term.* Greek daily, reading Longinus on the Sublime; Rhetoric daily by lecture; Chemistry daily, Roscoe's Chemistry and lectures; Chemical experiments and lectures on Saturdays.

*Third Term.* Latin daily, reading the Odes of Horace; German daily, Comfort's German Reader, with Outlines of German Literature, and exercises; Norton's Astronomy daily; lectures on German Literature on Saturdays.

### *Senior Class.*

*First Term.* Intellectual Philosophy daily, by lecture; Zoölogy and Physiology daily, Dalton and lectures; Greek daily, reading

Plato, with lectures on Greek and Philosophy ; lectures on Saturdays on Art.

*Second Term.* Intellectual Philosophy daily, lectures ; German daily, William Tell and exercises ; History daily, Guizot and lectures.

*Third Term.* Political Economy daily, lectures ; Constitutional Law daily, lectures ; Geology daily, Dana and lectures ; lectures were also given on *Æsthetics* during a part of the term.

#### *Resident Graduates.*

The resident graduates pursue advanced studies, under the instruction of the Professors, in such departments as they may select.

#### *Analytical Chemistry.*

Classes are formed from time to time for the study of Analytical Chemistry, consisting of graduates and such undergraduates as are permitted by the Faculty to substitute that study for some part of the prescribed course. A part of each day is spent by the Professor of Chemistry with these classes in the laboratory.

### 8. EXERCISES.

In English Composition and Delivery, the Seniors delivered original orations before the Faculty and students of the University during the first and second terms, two of the class speaking each week. The Juniors delivered original orations in the same way the third term.

The Juniors and Sophomores had exercises in the Composition of essays, and the Juniors oral class-room dissertations under the criticism of the Professor of Rhetoric.

The Freshman class had exercises in epistolary style during the third term.

### 9. EXHIBITIONS AND PRIZE CONTESTS.

Premiums are open for competition to those students only who are present at the University during the year, and regular in their attendance upon all the required exercises, and whose standing is good in the studies of each department.

#### *Senior Class.*

A premium is given to the member of the Senior class who shall write the best essay on a subject selected by the Faculty. Two gold medals, of unequal value, and together worth seventy dollars, are

given to the two members of the graduating class (speaking on Commencement day) whose exercises shall exhibit, respectively, the first and second grades of excellence in thought, composition and delivery combined.

A gold medal of the value of \$100 is awarded to the student in each graduating class (having been three years a member of the University, and having maintained a good standing in all the studies of the curriculum) who shall have passed the best examination on the mathematical studies of the entire course, and also on some special mathematical topic assigned by the Faculty; provided that such examination shall have attained a certain absolute value.

#### *Junior Class.*

A premium is given to the member of the Junior class who shall have passed the best examination upon some portion of a Greek author, selected by the Faculty, which shall have been read in addition to the regular and required course of Greek study.

#### *Sophomore Class.*

A premium is given to the member of the Sophomore class who shall have passed the best examination upon some portion of a Latin author, selected by the Faculty, which shall have been read in addition to the regular and required course of Latin study. A premium is given for the best exercises in declamation by members of the Sophomore class.

#### *Freshman Class.*

A premium is given to the member of the Freshman class who shall have passed the best examination upon some mathematical discussion selected by the Faculty.

The best students of each class are generally engaged in an earnest and manly competition for these premiums.

Premiums may be divided at the discretion of the Committee of Award.

### 10. EXAMINATIONS.

The requirements for admission, as published in the Annual Catalogue, are as follows:

Candidates for admission to the University are expected to furnish satisfactory testimonials respecting character; and, if from other colleges, certificates of regular dismissal.

No person will be admitted to the Freshman class who has not completed his fourteenth year, or to an advanced standing without a corresponding advance in age.

The Monday and Tuesday before Commencement, and the Wednesday before the opening of the following term, are the regular times for examining candidates. Examinations may take place at other times at the discretion of the Faculty.

*For the Classical Course.*

Kerl's Shorter Course in English Grammar; Guyot's Common School Geography; Swinton's Condensed History of the United States; Robinson's Arithmetic; Robinson's University Algebra, to Quadratic Equations; Robinson's Geometry, three books; Harkness', or Allen and Greenough's, Latin Grammar; four books of Cæsar's Commentaries; four Orations of Cicero, of which one shall be that for the poet Archias, and one that for the Manilian Law; six books of Virgil's *Æneid*; Hadley's, or Crosby's, Greek Grammar; three books of Xenophon's *Anabasis*.

*For the Scientific Course.*

The same as for the Classical Course, with the exception of the requirements in Greek.

*For the Eclectic Course.*

Sufficient preparation to profit by the instruction given to any existing class.

A fair equivalent for the above requirements will of course be accepted, but candidates for admission are advised to conform, literally, to the requirements of the catalogue. Upon their examination for entrance, and in their subsequent instruction, it will be taken for granted that they have done so.

Persons who wish to pursue studies in this city or vicinity, preparatory to admission to the University, will find ample facilities for doing so under the advice and direction of the Faculty.

Any student who may be admitted to the University under conditions, as also any student who, after admission, may have shown himself deficient in any department of study, will be required to make up his deficiencies under a private tutor, who shall be selected by the Faculty. All existing deficiencies of this nature will be noted in the catalogue. Special examinations will be held on the third

Saturday after the beginning, and the third Saturday before the close of each term for the accommodation of students who may have been absent from the regular class examinations, or who may have failed to pass those examinations.

Each class is publicly examined at the close of each term. The examination is conducted by the officer in charge of the study, together with another officer appointed as his associate, and in the presence of the President and members of the Faculty. The examinations are conducted by a combination of written and oral exercises, half a day being devoted to each class in each examination.

### 11. MODE OF INSTRUCTION.

In the Sophomore and Freshman Classes, the instruction is mainly given by the text-books, accompanied by a searching analysis of the author and subject studied. In those English studies which admit of it, the student is required to give, in his own words, an outline of the author studied. The questions of the teacher, being supplementary, are designed to draw out the student's conception of the author's ideas, and the independent thought which the student himself may have developed on the subjects under discussion.

In the higher classes, lectures are constantly connected with the subjects studied in the text-books. Lectures are given during the year on the following subjects :

1. English Language and Literature.
2. Natural Philosophy.
3. Chemistry.
4. Geology.
5. Mineralogy.
6. Botany.
7. Ethnology.
8. Ancient, Mediæval and Modern History.
9. Greek and Roman Literature.
10. Greek and Roman Philosophy.
11. Intellectual and Moral Philosophy.
12. Political Economy.
13. Comparative Philology.
14. Æsthetics.

With a few exceptions, students are examined on the subject-matter of the lectures as well as the text-books.



The recitations are held ordinarily from 9.15 to 12.15 A. M., each working day, except Saturdays, when the exercises are somewhat shorter.

## 12. DISCIPLINE.

The discipline of the University is chiefly moral. There is no written code to regulate the conduct of the students, and the Faculty rely mainly upon examples, general suggestions and personal association and intercourse to secure, on the part of the students, propriety of conduct and gentlemanly behavior. When these means, faithfully applied, have failed, it is considered as proof that the delinquent is unfit for the association and privileges of a literary life, and the parent or guardian is requested quietly to remove him from the University.

The plan of the University dispenses with College dormitories as a source of serious evils, and experience has thus far shown that a residence in moral and religious families is every way more desirable for the student.

Punctual attendance on all the required exercises is diligently enforced. An exact record of all absences and delinquencies, as well as attendance, is kept, together with an estimate of the excellence of each recitation. These records form a history of each student during the period of his residence.

## 13. GRATUITOUS AID.

Forty scholarships of one thousand dollars each have been endowed for the use of students for the Christian ministry. A good portion of these scholarships have been used during the said year. Twelve free scholarships have been guaranteed to the common schools of the city of Rochester. These are selected each year under proper regulations from these schools. The effect upon the schools has been stimulating and salutary, and several individual scholarships named after the donors of the same.

## 14. STATUTES OR BY-LAWS OF THE UNIVERSITY.

These are few and have not yet been matured, time being necessary to enable the Trustees to adapt them to the conditions and exigencies of a new institution. They will be transmitted to the Regents as soon as they shall have received their final form.

## 15. REAL ESTATE, DESCRIPTION AND VALUE OF COLLEGE BUILDINGS.

1. Anderson Hall, with 23½ acres land and improvements, cost \$90,310.60, worth.....	\$150,000 00
2. Sibley Hall, in process of erection, cost.....	10,000 00
3. President's House, nearly four acres land, cost \$38,000, worth .....	40,000 00
4. Mount Hope lot, cost.....	115 00
5. Lea Attle property .....	510 00
6. Cabinets, cost \$22,229.12, worth.....	35,000 00
7. Library, cost.....	18,844 26
8. Philosophical Apparatus .....	4,492 43
9. Furniture .....	3,946 03
10. Art Gallery .....	289 70
	<hr/>
	\$263,197 42
	<hr/>

## 16. DESCRIPTION OF OTHER COLLEGE PROPERTY.

1. Bonds and Mortgages..	\$26,433 16
2. Monroe County Bonds .....	12,100 00
3. United States 10-40 Bonds, par.....	10,000 00
4. Ulster County Bonds .....	2,000 00
5. Peninsula Railroad bonds .....	10,000 00
6. Cleveland and Pittsburgh Railroad Stock, cost ...	39,970 38
7. Detroit and Monroe and Toledo Bonds.....	5,000 00
8. Western Union Bonds .....	8,530 00
9. Brockport Village Bonds.....	10,000 00
10. Bills receivable .....	18,731 84
11. Subscription account.....	19,750 00
12. Due from students .....	5,233 94
13. Cash on hand.....	437 51
	<hr/>
	\$346,923 97
	<hr/>

## 17. DEBTS.

1. Mortgage on President's House .....	\$5,000 00
2. Due bank and all other parties .....	2,025 00
	<hr/>
	\$7,025 00
	<hr/>

## 18. REVENUE.

1.	Amount received for interest and dividends.....	\$4,643 55
2.	“ “ Term bills.....	6,345 00
3.	“ “ Diplomas.....	203 50
4.	“ “ Rathbone Library account..	1,508 95
5.	“ “ Davis Prize Fund .....	140 00
6.	“ “ Stoddard Scholarship .....	105 00
7.	“ “ Shelden “ .....	70 00
8.	“ “ Dewey Prize Fund .....	35 00
9.	Individual subscriptions.....	4,745 10
		<hr/>
		\$17,796 10
		<hr/> <hr/>

## 19. INCOME AND EXPENDITURE ACCOUNT.

1.	Amount paid Faculty and other officers' .....	\$20,195 84
2.	Current expense account .....	3,307 31
3.	Free Tuition given away.....	3,574 00
		<hr/>
		\$27,077 15
		<hr/> <hr/>
Expenditures over income.....		\$9,281 05
		<hr/> <hr/>

## 20. TABULAR STATEMENT.

Number of Courses of Study.....	9
Number of Professors .....	9
Number of Tutors, etc .....	
Number of students last year.....	134
Number of graduates at last Commencement .....	19
Whole number of graduates.....	487
<hr/>	
Value of College buildings and grounds.....	\$200,625 00
Value of Library and apparatus.....	23,336 69
Value of other College property .....	386,159 70
Revenue for last Collegiate year .....	17,796 10
Expenditure for last Collegiate year .....	27,077 15
Amount of debts of the College .....	7,025 00
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## 21. PRICE OF TUITION.

Tuition, per term, including incidentals, \$20, or \$60 per annum.

## 22. REMARKS.

Hon. Hiram Sibley, of Rochester, is erecting a stone building to hold our valuable cabinets and library, and foundation is built at a cost of over \$10,000, and the whole building will cost at least \$75,000 more, built in the most substantial manner.

## 23. CLOSE OF REPORT.

The financial statement was presented to full Board of Trustees July 2, 1872, and by them approved, and the seal of the University ordered to be affixed, with the signatures of President and Secretary attached.

[L. S.]

M. B. ANDERSON, *President.*

WILLIAM N. SAGE, *Secretary.*

X. UNIVERSITY OF ALBANY—DEPARTMENT OF LAW.

*To the Regents of the University of the State of New York :*

The Trustees and Faculty of the Law School of the University of Albany, in compliance with the requisition of the Regents of the University, report as follows :

The Professors and topics assigned to each are the following :

Hon Ira Harris, LL. D., Practice, Pleadings and Evidence.

Isaac Edwards, Personal Property, Contracts and Commercial Law.

Hon. Matthew Hale, Real Estate, Wills, Criminal Law, Personal Rights and Domestic Relations.

Hon. William F. Allen, on Law of Real Estate.

Hon. William L. Learned, on the relation between the Civil or Roman and the Common Law.

NUMBER OF STUDENTS.

Number of students, academic year 1871-72.....	95
Graduates during the same year .....	68

DEPARTMENTS AND TOPICS.

The Faculty, in order to systematize their labors and thus render them the more effectual, have embraced the legal topics upon which they lecture in three departments. Three terms complete the whole course of instruction. A student commencing with any term, by attending that and the two succeeding ones, will complete the entire course of instruction, and may become a candidate for graduation ; and as one term is in no way dependent upon another in the study and mastery of its appropriate topics, the student may just as profitably enter one as another for the commencement of his course. He may also, with equal advantage, enter any term while in progress, and complete his course by remaining until he has reached the point at which he commenced.

The course of study is as follows :

*First Term.* Prof. Edwards: Personal Property, Contracts and Partnership.

Judge Harris: Common, Statute and Constitutional Law; Common Law and Equity Practice, with that of the New York Code.

Judge Allen: Law of Real Property.

*Second Term.* Prof. Edwards: Corporations, Contracts of Sale, Negotiable Paper, Suretyship and Guaranty.

Judge Harris: Equity Jurisprudence, Common Law and Equity Pleadings, and Pleadings under the Code.

Prof. Hale: Domestic Relations and Real Estate.

*Third Term.* Prof. Edwards: Law of Fixtures, Bailment, Principal and Agent, Insurance.

Judge Harris: Law of Evidence.

Prof. Hale: Criminal Law.

Hereafter, the Hon. William F. Allen will deliver a course of lectures on Property, Uses, Trusts, Powers and Wills; and the Hon. William L. Learned will lecture on the relation existing between the Civil or Roman and the Common Law.

#### METHOD AND MEANS OF INSTRUCTION.

These are mainly by lecture and examination. Professor Edwards lectures and examines daily, except Sundays, through each term of the course. Judge Harris, Judge Allen or Professor Hale also lectures daily with the like exception.

All the lectures are oral, and are expositions of legal principles, with illustrations and applications. They are also accompanied by such references, hints and suggestions as are deemed the best calculated to enable the mind the more thoroughly to master and retain them.

The Faculty have, however, a higher aim than simply teaching young men the Law. They will also use their best endeavors to teach those who are intending to enter the profession to be lawyers. This is felt to be an arduous and difficult task. It is training the mind to a right use of its own faculties. It is giving it a power over its own resources, and enabling it fully to avail itself of its own stores of knowledge.

This is sought to be accomplished in a variety of ways, principally, however, by accustoming the young man to do *that, as a student, which will afterward be required of him as a lawyer.*

The practical lawyer owes his success, in a great measure, to his quickness and accuracy in *applying legal principles to the facts of his case.* This the student is here taught to learn in the outset, by examining the reported cases referred to in the lectures to sustain the principles laid down.

The Moot Courts are another feature of importance to be noticed. Questions or causes, previously given out, are here argued by four of the students. These questions and causes are either taken from and designed to illustrate some vexed points arising in the lectures, or they are real causes pending before the Supreme Court or Court of Appeals.

Upon the conclusion of the argument, the cause is given to the class to discuss and decide. This gives rise to discussions of great interest and profit, in which large numbers of the class participate. After the discussion and decision by the class, the presiding professor gives his views on the questions involved, and on the correctness or incorrectness of the decision. Two of these courts are held each week. By judiciously pursuing this course, varied in such respects as experience may suggest, it is confidently expected that the student may be essentially aided in his efforts to become a ready, fluent and correct extemporaneous speaker, and that he may also acquire good habits of speaking—learning never to sacrifice sense to sound, or solid argument to showy declamation.

Another exercise, which is attended with very beneficial results, is the previous appointment of two of the students to prepare and read before the class their written opinions upon the points involved in each question or cause, and the grounds upon which they rest their decision. This requires the deliberate exercise of judgment, the balancing the opposing arguments, and is well adapted to fit the mind for the investigation of truth, for deciding upon controverted legal points, and for acting, if ever required, in a judicial capacity.

In addition to these class exercises, in which all the students will be required to participate, it will be optional with them to organize and conduct as many special Moot Courts as they choose, and as many debating clubs, in which they may practice forensic eloquence, as they may think proper, and all reasonable facilities will be afforded them for these purposes.

Of these facilities the students largely avail themselves. Besides the Associated Congress for debating general questions, the students form clubs, consisting usually of from fifteen to twenty in number, which devote themselves exclusively to the discussion of law questions. Every evening in the week, except Saturday and Sunday, may be occupied by the meeting of one of these clubs. Here are presented good opportunities for the discussion of legal principles, and of learning their proper application. The student will feel under no

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restraint, as he is arguing only in the presence of his associates, whom he has himself assisted in selecting. The foundations are laid here for subsequent discussions in the class. The recent addition of a library, easily accessible both to the club and class, adds immensely to these facilities, since it affords the means of bringing the cases relied upon by each side under immediate critical examination and discussion.

#### READING, TEXT-BOOKS AND FACILITIES FOR INSTRUCTION.

The reading which is more especially recommended consists in a close and critical examination of the cases referred to in the lectures, and which are cited to sustain and apply to their appropriate facts the legal principles there laid down. This species of reading, so different from that ordinarily pursued by the student in a law office, serves to fix the principles permanently in his mind, and to familiarize him with their application. For this purpose, library facilities are, it is believed, more largely furnished in Albany than in any other place. These are: 1st. Large libraries belonging to members of the legal profession, to which many students are fortunate enough to gain access by obtaining seats in the office. 2d. The Law Library of the school, which is a well-chosen, good-working library; and 3d. The Law Library of the State, the best selected and most extensive in the United States. The students are permitted to use this for the purpose of reference, subject to such rules and regulations as will secure to the judges and members of the legal profession that full and free access to which they are by right entitled. In addition, it is earnestly urged upon each student to procure for his own special use a few elementary books—such as Kent's Commentaries, and as many of the text-books recommended as he is able. These he can consult at his room in connection with the lectures, and also make use of them in his investigations of questions arising for discussion in the clubs and Moot Courts. The following are among the text-books recommended by the Faculty, viz.: Kent's Commentaries; Parsons, Story, or Chitty, on Contracts; Colyer on Partnership; Angell & Ames on Corporations; Hilliard on Sales; Edwards on Bills of Exchange and Promissory Notes; Edwards on Bailment; Dunlap's Paley on Agency; Reeves' Domestic Relations; Wharton's Criminal Law; Archbold's Criminal Practice and Pleadings; Redfield on Wills; Bouvier's Law Dictionary. Others will be recommended during the course.



The opportunities for witnessing all the varieties of legal practice and styles of argument are much greater in the city of Albany than in any other place of the same size. Besides the other courts, all the sessions of the Court of Appeals are held in Albany. In these the law student will have an opportunity of listening to the highest and purest styles of judicial reasoning, and of forming his own upon the most faultless models.

The law students are admitted free of charge to the lectures delivered in the Albany Medical College, and for a small fee to those delivered before the Young Men's Association. There is also a Gymnasium in the city under excellent regulations, in which an extensive system of gymnastic exercises can be carried on, and to which the law students can have constant access. ●

#### TERMS.

There are three terms held as follows :

The first, commencing on the first Tuesday of September, will continue for twelve weeks, closing on Friday of the twelfth week.

The second will commence on the last Tuesday of November, and will continue for fourteen weeks, with the exception of a vacation of two weeks, including the holidays.

The third will commence on the first Tuesday of March, and continue for twelve weeks, closing on Friday of the twelfth week.

The fee required in all cases where the student pays by the single term will be \$50, payable in advance. But he may, when he enters, pay \$130, which will be received in full for the whole course, or \$90 for two terms. Should the student from any necessity be prevented from attending both the terms or the entire course, the money will be in part refunded.

No examination and no particular course of previous study are necessary for admission. Attendance in the early part, even in the commencement of their legal studies, is recommended to those whose minds are sufficiently matured, as the habits they will acquire, and the hints, suggestions and guides furnished them, will essentially aid them in their subsequent course of study.

#### REQUIREMENTS FOR GRADUATION.

The University of Albany confers no degree as a matter of course. On complying with the following provisions, the student may become a candidate for that of Bachelor of Laws :

He must be twenty-one years of age, must sustain a good moral character, and must have attended three full terms of the Law school. He must, in addition, have sustained satisfactory examinations through the different terms; must have faithfully performed all the exercises assigned to him, and have prepared and read before the class and the Faculty, six weeks before the close of the term at which he proposes to graduate, a dissertation on some legal subject, or some subject connected with the history, science or practice of the law, written by himself; the same to be written on alternate pages of ordinary sized letter paper, having a wide inner margin, and being in length from seven to ten pages, and not to occupy more than ten minutes in the reading thereof. Upon complying with these provisions, and upon payment of a graduation fee of ten dollars and all back dues, he may, if properly qualified, receive a diploma conferring the degree of Bachelor of Laws.

This diploma, by an act of the Legislature, entitles the person upon whom it is conferred, without further examination, to be admitted to practice as attorney and counselor-at-law in all the courts of this State.

#### BUILDING, LIBRARY, DEBT.

The building in which the school is conducted is in the south wing of the Medical College building. The land belongs to the city, and is leased to the Law School at a nominal rent. The building was erected by the Law Faculty for the University, with the aid received from a few generous men of Albany. The institution is free from debt. The Law Hall contains a fair law library, worth \$2,000, which is exclusively devoted to the use of the students.

THOMAS W. OLCOTT,  
*President of the Board of Trustees.*

ORLANDO MEADS, *Secretary.*

# XI. ELMIRA FEMALE COLLEGE, ELMIRA, CHEMUNG COUNTY, N. Y.

*To the Regents of the University of the State of New York :*

The Trustees of the Elmira Female College, in compliance with the requisition of the Regents of the University, submit the following report for the last collegiate year, ending the 27th day of June, 1872, containing a just and true statement, showing the progress and condition of said college for said year in respect to the several matters following, viz. :

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The plans of the College contemplate regularly organized and endowed Professorships. At present the departments of instruction are as follows :

1. Mental and Moral Philosophy, Sacred Literature and *Æsthetics*.
2. Physical Sciences, Mathematics and Astronomy.
3. Ancient Languages and Literature.
4. Modern Languages and Literature.
5. History, English Literature and Rhetoric.
6. Physical Culture.
7. Music.
8. Painting and Drawing.

## 2. TRUSTEES, FACULTY AND OTHER OFFICERS.

### *Trustees.*

- Hon. John T. Rathbun, Chairman, Elmira.  
 Hon. Eaton N. Frisbie, Elmira.  
 Hon. Thomas A. Johnson, LL. D., Corning.  
 Hon. George W. Schuyler, Ithaca.  
 Gen. Alexander S. Diven, Elmira.  
 John G. K. Truair, Esq., Syracuse.  
 William Alling, Esq., Rochester.  
 Rev. Philemon H. Fowler, D. D., Utica.  
 Rev. A. Augustus Wood, D. D., Geneva.  
 Rev. Augustus W. Cowles, D. D., Elmira.  
 Rev. William E. Knox, D. D., Elmira.

Thompson C. Maxwell, Esq., Geneva.  
 Eben B. Jones, Esq., Penn Yan.  
 J. D. F. Slee, Esq., Elmira.  
 David H. Tuthill, Esq., Elmira.  
 William Dundas, Esq., Elmira.  
 Newton P. Fassett, Esq., Treasurer, Elmira.  
 Grandison A. Gridley, Esq., Elmira.  
 Rev. Benjamin M. Goldsmith, Benton.  
 Howard M. Smith, A. M., Secretary.

*Faculty.*

Rev. Augustus W. Cowles, D. D., President and Professor of Sacred Literature, Mental and Moral Science and Æsthetics.

Rev. Darins R. Ford, D. D., Professor of Physical Science, Mathematics and Astronomy.

Miss Anna M. Bronson, Lady Principal, with classes in English Literature, History and Physiology.

Miss Eliza Harriet Stanwood, Preceptress of Latin, Algebra and Christian Evidences.

Mademoiselle Agathe Elize Jacot, Preceptress of French and German Languages and Literature.

Miss Charlotte L. Chubbuck, Preceptress of History and Arithmetic.

Miss Clara H. Hannum, Gymnastics, Elocution, English Analysis and American History.

Mrs. L. A. Wentworth Fowler, Music Department—Organ, Piano, Guitar and Vocal Culture.

Miss Mary W. Knight, Miss Sara J. Adams, Piano.

George W. Waters, Esq., Painting and Cast Drawing.

Miss Kate M. Bacon, Painting and Pencil Drawing.

Mrs. Fidelia E. Stanley, Matron.

Mrs. Sophia M. Steele, Acting Matron (in the absence of Mrs. Stanley.)

W. Franklin Benjamin, Clerk and Steward.

3. NUMBER AND CLASSIFICATION OF STUDENTS.

Whole number of students in all departments, including Collegiate, Eclectic, Preparatory and Special.....	191
Collegiate (Regular and Eclectic).....	74
Classical Preparatory.....	40

English Preparatory .....	66
Special Students (chiefly in Art School) .....	11
Number graduated last Commencement .....	10
Whole number of Alumnæ (thirteen classes) .....	<u>148</u>

No one is admitted to the lowest class of the Preparatory department who is under fourteen years of age.

No student is graduated unless she has taken the full classical and regular course. The diploma confers the Baccalaureate degree, as in other colleges.

The students have been classified according to the well known method of a full College course, in four annual graded classes, to which they are advanced only by sustaining a thorough examination.

The Eclectic department includes those who are prepared for the College studies, except Latin, and who, with the approval of the President, take selected studies from the higher classes.

The Preparatory department comprises two divisions.

The Classical and the English students must be not under fourteen years of age, and must pass a satisfactory examination, or present a recent Regents' certificate, to be admitted to the Preparatory classes.

Students were from the following States and countries :

From the State of New York .....	133
From other Middle States .....	36
From New England States .....	4
From Southern States .....	5
From Western States .....	9
From Indian Territory .....	1
From Ontario, Canada .....	1
From Asiatic Turkey .....	2
Total .....	<u>191</u>

#### 4. DEGREES.

The regular degree of B. A. was duly conferred upon the following named candidates :

Eva L. Bentley, Margaret L. Crittenden, Rose A. Gable, Caroline A. Hemiup, Mary W. Hinman, M. Ella Lyon, Electa C. Parsons, Louise S. Parsons, Iva L. Pomeroy, Ella B. Smith.

## 5. COLLEGE TERMS AND VACATIONS.

The sessions of College are semi-annual of twenty weeks each. A vacation of two weeks occurs, including the holidays ; and a summer vacation of ten weeks following Commencement.

## 6. COURSE OF STUDY.

This College has been from the first fully committed to the principle, that young women ought to share in the best methods and appliances which experience has shown to be best adapted to the liberal education of young men ; and that a college should not be a place devoted to special preparation for professions, but chiefly for that broad, generous culture that all alike need for personal improvement as individuals.

The regular course of study for the usual Baccalaureate degree is intended in good faith to be fully equivalent in extent and thoroughness to the ordinary undergraduate course in the other colleges of this State.

The Latin course is full and thorough, with a little less in amount than is usually read in colleges, but this is fully balanced by a larger amount of modern languages and general literature, with optional Greek.

It is believed that a full equality with the average course in other colleges is maintained in Physical Science, Mathematics, Astronomy, Philosophy, History and Æsthetics.

In addition to the regular course, very complete advantages for the higher cultivation of Art and Music are furnished. These include studios for painting and drawing from the round under a professional artist ; and also a superior organ and pianos, with well arranged music rooms.

The regular course for the Baccalaureate degree is as follows :

I.—*Protomathean Class.*

*First Session.* Cicero's Select Orations ; Robinson's University Algebra ; Physical Geography ; Drawing.

*Second Session.* Sallust and Virgil ; University Algebra ; Botany and Zoölogy ; Drawing.

II.—*Sophomore Class.*

*First Session.* Horace (Hanson's Selections) ; French ; Political and Domestic Economy, with lectures ; Christian Evidences ; Geometry begun.

*Second Session.* Geometry finished ; Trigonometry, Plane, Spherical and Analytical ; Natural Philosophy ; French continued.

### III.—*Junior Class.*

*First Session.* French (literature and conversation) ; Chemistry ; Mental Philosophy ; German or Greek.

*Second Session.* French continued ; Geology ; Moral Philosophy ; German or Greek.

### IV.—*Senior Class.*

*First Session.* Astronomy, with use of Instruments and Observatory ; German Language and Literature ; English Literature ; White's Christian Centuries ; Kames' Elements of Criticism.

*Second Session.* Schlegel's History of Literature ; Astronomy, with original observations ; Natural History (lectures) ; Butler's Analogy ; Art (history and criticism), with illustrated lectures on Architecture, Sculpture and Painting.

## 7. EXERCISES.

The regular studies have been largely illustrated and supplemented by lectures and general exercises. All students through their entire course have two class exercises weekly in Rhetoric and Elocution. An original English composition is required once a fortnight from every student. Also, a general class is held weekly for chorus singing and for training in vocal music.

On every Wednesday morning a public recitation is held in the chapel in presence of the Faculty and students ; each class in rotation giving a specimen recitation several times during each session. Gymnastic and Calisthenic exercises are held four times each week.

The two Literary Societies, Callisophia and Philomathéa, hold regular meetings each week, the exercises of which consist of original essays, elocutionary recitations or readings, discussions and critical reviews.

Bible classes are held every Sabbath evening, and a monthly meeting of the Christian Association for presenting information by essays or select readings upon topics of religious interest. Chapel exercises, consisting of reading the Scriptures, singing and prayer, are held twice each day.

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### 8. EXHIBITIONS AND PRIZES.

The literary societies have each two public meetings each year. The exercises consist of essays, recitations, debates, vocal and instrumental music.

A prize has been founded by Francis Hall, Esq., of this city, for the best English essay, preference to be given to such as are appropriate for journalism or periodical literature.

### 9. EXAMINATIONS.

Students are examined on entrance to every class, or, if conditioned, their class positions are regarded as unsettled until their examinations are completed.

At the close of each session, and more especially at the close of the collegiate year, a careful examination-review is held in presence of a board of examiners and such visitors as may be in attendance.

A careful roll of scholarship and deportment is kept, and no student whose scholarship is unsatisfactory is advanced to a higher class.

### 10. MODE OF INSTRUCTION.

Instruction is chiefly by recitation from text-books, supplemented by lectures and illustrations. In the more advanced classes, notes and abstracts are required.

### 11. DISCIPLINE.

The students form one family and prepare their lessons in their own rooms, without the use of a public desk-room. They are expected to learn and practice habits of self-respect and self-control.

Whatever special discipline is needed, is designed to be administered with kindness, patience and courtesy, yet with such firmness as to secure cheerful obedience to all the rules and regulations of the College. A careful roll of deportment is kept, which is reviewed and reported in chapel once in each week.

### 12. GRATUITOUS AID.

The College has a fund of \$25,000, left as a legacy by the late Simeon Benjamin, the interest of which is appropriated, in various sums, to supplement the means of worthy young women whose talents and abilities give special promise of usefulness. This is called the Benjamin Aid Fund. Besides this, Gen. A. S. Diven has endowed



a scholarship, the income from which pays the whole expense of board and tuition in all the regular studies for one student. The experience of the College has shown that no department of philanthropic beneficence promises so much as that of founding permanent scholarships, or foundations for the assistance of the large class of worthy young women who need such aid, and who, by means of it, may become sources of the best personal, social and Christian influence upon the coming generations.

### 13. DESCRIPTION AND VALUE OF BUILDINGS.

The principal College edifice is an elegant structure, consisting of a central octagon, and two wings terminated by towers.

This building contains a commodious chapel, parlors, society halls, library, class rooms, museum of natural history, laboratory, dining room, music rooms, studios for the Art department, and handsomely furnished rooms for teachers and students.

The building is heated by ten large hot-air furnaces, lighted with gas and supplied with water for bath-rooms and closets. It is thoroughly ventilated, and furnished with all needed conveniences for the health, comfort and contentment of students.

The College also owns a commodious residence occupied by the President.

Present value of College edifice.....	\$100,000 00
Present value of President's house.....	6,000 00
Present value of grounds .....	32,000 00
Present value of lot on Washington avenue .....	1,800 00
Total real estate .....	<u>\$139,800 00</u>

### 14. OTHER COLLEGE PROPERTY.

Educational fund, in care of the State .....	\$50,000 00
Benjamin aid fund .....	25,000 00
Diven scholarship fund ..	4,000 00
Benjamin endowment .....	12,000 00
College and Society libraries .....	4,500 00
Furniture and fixtures.....	13,000 00
Musical instruments.....	5,500 00
Philosophical and chemical apparatus.....	2,000 00
Carried forward .....	<u>\$116,000 00</u>

Brought forward.....	\$116,000 00
Cabinet of natural history.....	2,500 00
Casts, paintings, etc., for Art school.....	700 00
	<hr/>
	\$119,200 00
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15. INCOME AND EXPENDITURE.

*Income.*

Total amount of term bills.....	\$33,557 31
Interest from State educational fund.....	3,500 00
Interest from Benjamin aid fund.....	1,750 00
Interest from Benjamin endowment fund.....	840 00
	<hr/>
	\$39,647 31
	<hr/>

*Expenditures.*

Salaries for instruction.....	\$10,370 02
Other salaries and wages.....	5,110 00
Table expenses.....	10,900 66
Light and fuel.....	2,380 62
Interest and insurance.....	2,827 50
Ordinary repairs.....	2,746 47
Permanent improvements.....	4,868 09
	<hr/>
	\$39,203 36
	<hr/>

16. DEBTS.

Bond and mortgage to Wickham.....	\$5,000 00
Bond and mortgage to Goff.....	5,000 00
Bond and mortgage to Kelly estate.....	1,400 00
Bond and mortgage held by endowment fund.....	9,500 00
Interest due endowment fund.....	3,500 00
Miscellaneous.....	3,000 00
	<hr/>
	\$27,400 00
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17. PRICE OF TUITION.

Tuition for the year included in this report, with board, furnished room, fuel and light, was charged at \$300. There are no extra charges except for washing, music, painting and advanced drawing.

## 18. CLOSE OF REPORT.

The above report is submitted by the Executive Committee in accordance with a standing resolution of the Board of Trustees, directing them to make the annual report to the Regents, and affix the seal of the College with the signatures of the Chairman and Secretary of the Board.

E. N. FRISBIE,  
*Chairman, etc.*

HOWARD M. SMITH, •  
*Secretary.*

[L. s.]

## XII. ST. LAWRENCE UNIVERSITY, CANTON, ST. LAWRENCE COUNTY.

*To the Regents of the University of the State of New York :*

The Trustees of St. Lawrence University, in compliance with a requisition of the Regents of the University, submit the following as a just and true report of its progress and condition during and at the close of the last collegiate year, ending on the 26th day of June, 1872, the day of its Annual Commencement.

## 1. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

*Trustees.*

Jonas S. Corkey, M. D., Chairman, Canton.  
Levi B. Storrs, Esq., Secretary and Treasurer, Canton.  
Ebenezer Fisher, D. D., Canton.  
Hon. S. N. Sherman, Ogdensburgh.  
Silas C. Herring, Esq., New York.  
G. W. Montgomery, D. D., Rochester.  
J. H. Hartzell, D. D., Albany.  
Barzillai Hodskin, Esq., Canton.  
Theodore Caldwell, Esq., Canton.  
Rev. J. M. Austin, Auburn.  
P. S. Bitley, Esq., Branchport.  
Rev. L. C. Brown, Honeoye Falls.  
Abel A. Simmons, Esq., Canton.  
Rev. J. S. Lee, Canton.  
W. C. Shaw, Esq., Potsdam.  
James Brayley, Esq., Buffalo.  
Rev. J. M. Pullman, New York.  
Gen. E. A. Merritt, Potsdam.  
H. Robinson, M. D., Auburn.  
B. F. Romaine, Esq., New York.  
J. G. Bartholomew, D. D., Syracuse.  
Henry Rodee, Esq., Ogdensburgh.  
J. W. Clowes, D. D. S., New York.  
Washington Wheelock, Esq., Canton.

*Faculty.*

Rev. Richmond Fisk, Jr., D. D., President and Chapin-Professor of Intellectual and Moral Philosophy. Appointed August 11, 1868; resigned January 20, 1872.

Rev. A. G. Gaines, Acting President. Appointed February 9, 1872; appointed Professor of Intellectual and Moral Philosophy, June 25, 1872.

Rev. Ebenezer Fisher, D. D., President of Theological School and Dockstader-Professor of Theology and Ethics. Appointed January 22, 1857.

Rev. John Stebbins Lee, A. M., Professor of Ecclesiastical History and Biblical Archæology in Theological School. Appointed to Literary department April 13, 1858; appointed to Theological department January 14, 1869.

Rev. Orello Cone, A. M., Professor of Biblical Languages and Literature, and Instructor in German, in Theological School. Appointed September 1, 1865.

Rev. Moses Marston, A. M., Professor of the Latin and Greek Languages and Literature. Appointed May 27, 1868.

John Stocker Miller, A. M., Professor of Mathematics and German. Appointed August 24, 1871.

Rev. James Henry Chapin, A. M., Professor of Geology and Mineralogy. Appointed August 24, 1871.

Rev. Edwin C. Bolles, Ph. D., Lecturer on Microscopy, Chemistry, Zoölogy and Botany. Appointed April 20, 1871.

Martha A. Hardacker, Instructor in French.

Marcia A. Adams, B. S., Tutor.

Professor Marston, Librarian.

E. J. Sykes, steward.

2. NUMBER OF STUDENTS.

The whole number of students, undergraduates, during said year, was ..... 80

The number of graduates at the Annual Commencement, June 26th and 27th, 1872, was:

Collegiate ..... 7  
Theological ..... 8

The whole number of graduates of the institution is ..... 111

## 3. CLASSIFICATION OF STUDENTS.

Senior class.....	7
Junior class.....	10
Sophomore class.....	8
Freshman class.....	10
Optional course.....	13
	<hr/>
	48
Theological students.....	26
Law students.....	6
	<hr/>
	80.
	<hr/>

## 4. DEGREES.

The degrees conferred at the last Commencement were as follows :

*Degrees in Course.*

A. B. George James Clarke Leslie, Alexander Lee, James Stowell, Rollin Eugene Sumner.

B. S. Daniel Bulkeley, Martha A. Hardacker, Mary Louisa Traffarn.

A. M. John Stocker Miller, Allen Eugene Kilby.

M. S. Julius Fred. Simmons.

## 5. COLLEGE TERMS.

There were two terms during the year, each of twenty weeks. The first term commenced August 31, 1871, and ended January 18, 1872. The second term commenced February 15, 1872, and ended June 26, 1872, the day of the Annual Commencement.

There was a vacation of four weeks between the terms, and a recess from December 24, 1871, to January 2, 1872.

## 6. COURSE OF STUDY.

*Freshman Class.*

## CLASSICAL.

## FIRST TERM:

Latin : Livy, first and part of second books ; Latin Prose Composition.

Greek : Herodotus, first book ; Grecian History.

Loomis' Algebra.

## SCIENTIFIC.

## FIRST TERM :

Loomis' Algebra, same as above.

French : Fasquelle's Grammar ; Napoleon Fitch's Physical Geography, complete (first half term) ; Weber's History (second half term).

Latin : Harkness' Grammar and Reader (taken by some students in place of French).

## CLASSICAL.

## SECOND TERM :

Latin : De Senectute and De Amicitia of Cicero ; Roman History.

Greek : Odyssey of Homer.

Loomis' Algebra, completed.

Loomis' Geometry.

## SCIENTIFIC.

French : La Literature Francaise.

German : Whitney's Grammar and Reader.

Loomis' Algebra, as above.

Loomis' Geometry.

Latin : Harkness' Grammar and Reader. Latin, was taken in place of French or German, by some students.

*Sophomore Class.*

## CLASSICAL.

## FIRST TERM :

Latin : Horace's Odes, Epistles and Satires.

Greek : Xenophon's Memorabilia.

Classical Antiquities. Weekly.

Loomis' Geometry, completed ; Conic Sections.

Alden's Civil Government. Three times a week.

## SCIENTIFIC.

French : La Literature Francaise.

German : Whitney's Grammar and Reader.

Latin : Cæsar's Commentaries.

Loomis' Geometry, completed ; Conic Sections.

Civil Government, as above.

CLASSICAL

SECOND TERM:

Latin : Tacitus, Germania and Agricola.  
Greek : Thucydides ; Greek Prose Composition.  
Botany and Physiology.  
Loomis' Trigonometry.

SCIENTIFIC.

French : Voltaire's Siecle de Louis XIV.  
German : Schiller's Wilhelm Tell.  
Latin : Cæsar's Commentaries.  
Botany and Physiology.  
Loomis' Trigonometry.

*Junior Class.*

CLASSICAL

FIRST TERM :

Latin : De Oratore of Cicero. Twice a week.  
Greek : Electra of Sophocles. Three times a week.  
Gillespie's Land Surveying.  
Barker's Chemistry.

SCIENTIFIC.

German : Lessing's Nathander Weise.  
Gillespie's Land Surveying.  
Barker's Chemistry.

CLASSICAL.

SECOND TERM:

Latin : Juvenal's Satires. Twice a week.  
Greek : Plato's Apology and Crito. Three times a week.  
Olmsted's Physics : Mechanics, Hydrostatics.  
Pneumatics, Acoustics, Electricity, Magnetism and Heat.  
Metaphysics : Bowen's Hamilton.  
Geology and Mineralogy.

SCIENTIFIC.

German : Goethe's Faust.  
Olmsted's Physics, as above.  
Metaphysics : Bowen's Hamilton.  
Geology and Mineralogy.



*Senior Class.*

## CLASSICAL AND SCIENTIFIC.

## FIRST TERM :

Moral Philosophy.  
 Omsted's Optics.  
 Loomis' Astronomy commenced.  
 Whately's Rhetoric.

## CLASSICAL AND SCIENTIFIC.

## SECOND TERM :

Bowen's Political Economy.  
 Butler's Analogy.  
 Jevon's Logic.  
 Loomis' Astronomy, completed.

## 7. EXHIBITIONS AND PRIZE CONTESTS.

*Exhibitions.* Public exhibitions were given by the Junior class near the end of the second term, and by the societies during the week of the Annual Commencement.

*Prizes.* Two prizes were offered, called "The E. T. Sherman Prizes;" one to the student of the Junior class who shall pass at the end of the Junior year the best written examination in Latin; the other to the student of the Junior class who shall pass at the end of the Junior year the most perfect written examination in Mathematics. This was won by Hiram A. Merrell.

## 8. EXAMINATIONS.

Candidates for admission to the Freshman class of the Classical course are examined in Latin Grammar; three books of Cæsar's Commentaries; six books of Virgil's *Æneid*; five orations of Cicero; Greek Grammar; two books of Xenophon's *Anabasis*; two books of Homer's *Iliad*; Arithmetic; Elementary Algebra; Geography; and History of the United States.

Candidates for admission to the Freshman class of the Scientific course and Combined course are examined in Arithmetic; Elementary Algebra; English Grammar; Geography, and History of the United States.

These examinations take place on the Friday succeeding the Commencement (this year on the 28th day of June), and on the Wednesday preceding the opening of the first term. Students are rejected

if found very deficient in any branch, or in general scholarship; if slightly deficient, they are entered under conditions.

There were two public examinations, one at the close of each term. These occupied from two to five hours in each subject, and were in part oral and in part written. All the classes were examined in each of the subjects of study pursued by them during the year.

Failure in examination reduces the student from his class. But he is allowed a second examination if the Professor is convinced, from his knowledge of the student, that it would be just.

#### 9. MODE OF INSTRUCTION.

The mode of instruction is chiefly by recitation from text-book, but in Geology and Mineralogy this was supplemented by lectures twice a week by the Professor. The students were required to take notes, and were examined at one sitting upon the lecture given at the preceding one.

#### 10. DISCIPLINE.

Discipline is under the supervision and direction of the President.

Regulations have been prescribed as an outline of what is expected from the student, but as a means of discipline these are regarded as subordinate to the development of a feeling of responsibility in the student. The policy sought to be carried out in the administration of the University is to educate and develop self-government and self-responsibility.

#### 11. GRATUITOUS INSTRUCTION.

The University offers free scholarships to the following schools, to be filled by students of those schools who shall pass the most perfect examination, viz. :

Two annually to Canton Union School and Clinton Liberal Institute.

One annually to each of the following :

Ogdensburgh Educational Institute; Massena Union School; Richville High School; Waddington Union School; Hermon Union School; St. Lawrence Academy; Gouverneur Union School; Lawrenceville Academy.

Candidates shall declare their purpose to pursue a full course in the University. There were, during the last year, fourteen students in attendance who held scholarships.

## LAW SCHOOL

This department was suspended at the close of the first term, in November, 1871, for reasons given in the annual catalogue, a copy of which is mailed herewith.

## TREASURER'S REPORT, ST. LAWRENCE UNIVERSITY.

*Assets.*

Bonds and mortgages . . . . .	\$74,002 66
Buildings and grounds . . . . .	60,000 00
Books in library . . . . .	10,134 37
Philosophical apparatus . . . . .	950 00
Furniture . . . . .	400 00
Subscriptions due and cash on hand . . . . .	1,917 34
Bequests liquidated (not paid in) . . . . .	57,000 00
	<hr/>
	\$204,404 37
	<hr/>

*Income and Expenditures.*

Cash on hand at date of last report . . . . .	\$264 62
Interest on bond and mortgage . . . . .	5,314 65
Principal on bond and mortgage . . . . .	4,512 95
Tuition . . . . .	644 80
Diplomas . . . . .	18 00
Room rent . . . . .	13 50
Bank stock sold and subscription collected . . . . .	4,009 55
Cash collected . . . . .	3,730 26
Cash borrowed . . . . .	7,217 47
	<hr/>
	\$25,725 80
	<hr/>

*Expended.*

For salaries . . . . .	\$14,596 39
For incidental expenses . . . . .	1,751 36
For repairs, etc. . . . .	224 09
For payments on cash borrowed . . . . .	8,636 62
Cash on hand . . . . .	517 34
	<hr/>
	\$25,725 80
	<hr/>

CANTON, November 15, 1872.

L. B. STORRS,  
Treasurer.  
A. G. GAINES,  
Acting President.

### XIII. ALFRED UNIVERSITY, ALFRED CENTRE, ALLEGANY COUNTY.

*To the Regents of the University of the State of New York :*

The Trustees of Alfred University, in compliance with requisitions of the Regents of the University, submit the following as their report for the College year ending July 4, 1872 :

#### 1. DEPARTMENTS.

Two general departments are in operation : a Collegiate and an Academic.

These have each a male and a female department, with equal powers and privileges. As subdivisions of these general departments, the following courses of study have been established, viz. :

1. A Classical Course.
2. A Scientific Course.
3. A Ladies' Course.
4. A Normal and Teachers' Course.
5. A Course in Industrial Mechanics.

#### 2. PROFESSORSHIPS.

1. English Language and Literature.
2. Latin Language and Literature.
3. Greek Language and Literature.
4. Pure Mathematics and Astronomy.
5. Industrial Mechanics.
6. Modern Languages.
7. Physical Sciences.
8. Natural History.
9. Metaphysical and Ethical Sciences.
10. Painting and Penciling.
11. Music.

#### 3. TRUSTEES.

Hon. Benjamin F. Langworthy, President, Alfred.

Rev. Nathan V. Hull, Vice-President, Alfred.

Elisha Potter, Treasurer, Alfred.

Silas C. Burdick, Recording Secretary, Alfred.

Rev. J. Allen, Corresponding Secretary, Alfred.

Maxson Stillman, Alfred.

Hon. Gerrit Smith, Peterborough.  
 Rev. Nathan Wardner, Southampton, Ill.  
 Rev. Thomas B. Brown, Genesee.  
 Rev. George B. Utter, Westerly, R. I.  
 Hon. John R. Hartshorn, M. D., Alfred.  
 Hon. Wolcott Hatch, Belmont.  
 Albert Smith, Alfred.  
 Hon. Philip S. Green, Alfred.  
 Elisha C. Green, M. D., Alfred.  
 Samuel N. Stillman, Alfred.  
 Alfred Lewis, Alfred.  
 Maxson J. Green, Alfred.  
 John A. Langworthy, Genesee.  
 Clark Rogers, Alfred.  
 Rev. Darius R. Ford, Elmira.  
 Ira B. Crandall, Alfred.  
 Hon. Benjamin Maxson, Hounsfield.  
 Charles D. Langworthy, Alfred.  
 William M. Saunders, Alfred.  
 William C. Burdick, Alfred.  
 David R. Stillman, Alfred.  
 Almon E. Crandall, Alfred.  
 Albert B. Crandall, Genesee.  
 Rowland A. Thomas, Alfred.  
 Rev. George B. Tomlinson, Westerly, R. I.  
 Oliver D. Sherman, Alfred.  
 Mark Sheppard, Alfred.  
 Charles M. Marvin, Alfred.  
 Ezra P. Crandall,\* Alfred.  
 Stephen C. Burdick, Alfred.

#### 4. FACULTY.

Rev. Jonathan Allen, President, Metaphysics and Ethics.  
 Charlotte E. Dowse, A. L., Preceptress, Grammar Department.  
 Rev. Nathan V. Hull, Pastoral Theology.  
 Rev. Thomas R. Williams, A. M., Biblical Theology.  
 Rev. Ethan P. Larkin, A. M., Natural History.  
 Ida F. Kenyon, A. M., German and French Languages and Literature.

\* Deceased.

Edward M. Tomlinson, A. M., Latin and Greek Languages and Literature.

Prosper Miller, A. M., Natural Sciences.

Albert Whitford, A. M., Mathematics.

Rev. A. Herbert Lewis, A. M., Church History.

Rev. Lucius Romain Swinney, Hebrew and Cognate Languages.

Abigail M. Allen, A. M., Amelia E. Stillman, A. L., Painting and Drawing.

Charles E. Moore, C. E., Industrial Mechanics.

Minerva F. Simpson, Helen M. Crandall, Music, Vocal and Instrumental.

Gurdon Evans, A. M., Mary J. Lanphear, Frank M. Van Allen, Union School Department.

Mark Sheppard, Book-keeping and Penmanship.

Signoria E. Smythe, Gymnastics.

## 5. COURSES OF STUDY.

### CLASSICAL COURSE.

#### *Freshman Year.*

1. Livy ..... Lincoln.  
    Memorabilia.....  
    Algebra, completed..... Loomis.  
    Latin Prose Composition, throughout the  
       year .....  
 2. Cicero de Senectute et Amicitia..... Anthon.  
    Greek Prose Composition..... Arnold.  
    Plane Trigonometry ..... Davies' Legendre.  
    Homer's Iliad.....  
 3. Tacitus' Germania et Agricola..... Tyler.  
    Selections from Greek Historians.....  
    Greek Prose Composition, completed.... Arnold.  
    Solid Geometry and Plane Trigonometry, Davies' Legendre.

#### *Sophomore Year.*

1. Selections from the Greek Historians.....  
    Spherical Geometry and Trigonometry... Davies' Legendre.  
    Rhetoric .....  
 2. Horace, Odes ..... Lincoln.  
    Astronomy ..... Loomis.  
    Elocution .....

3. Greek Tragedy, Antigone or Electra.....  
 Universal History.....  
 Surveying and Navigation..... Robinson.

*Junior Year.*

1. Horace' Satires.....  
 Natural Philosophy..... Quackenbos.  
 Chemistry..... Wells.  
 2. Physiology..... Hitchcock.  
 De Corona.....  
 Zoölogy..... Tenney.  
 3. Botany..... Wood.  
 Geology..... Dana.  
 Cicero de Officiis.....

*Senior Year.*

1. Logic, begun.....  
 Psychology, begun.....  
 Greek Testament.....  
 2. Psychology, continued.....  
 Ethics..... Lectures.  
 Law..... Lectures.  
 Logic, completed.....  
 3. Ethics.....  
 Æsthetics..... Lectures.  
 Theology..... Lectures.  
 History and Philosophy of Civilization... Lectures.  
 Plato, Apology and Crito or Gorgias.....

## LADIES' COURSE.

*Novian Year.*

1. Algebra, completed..... Loomis.  
 French, commenced..... Fasquelle.  
 Natural Philosophy..... Quackenbos.  
 2. Plane Geometry..... Davies' Legendre.  
 French, continued, Grammar and Reader, Fasquelle.  
 Physical Geography.....  
 3. Solid Geometry and Plane Trigonometry, Davies' Legendre.  
 French, Picciola or Corinne, Grammar,  
 continued..... Fasquelle.  
 Botany..... Wood.

*Sophomore Year.*

1. Spherical Geometry and Trigonometry . . . Davies' Legendre.  
Grammar, commenced . . . . . Comfort.  
French, Racine, Grammar completed . . . Fasquelle.
2. Astronomy . . . . . Loomis.  
German, continued, Grammar and Reader, Comfort.  
French, Louis XIV., Grammaire Francaise, Chapsal et Noel.
3. German, continued, Grammar and Reader, Comfort.  
Perspective . . . . .

*Junior Year.*

1. Chemistry . . . . . Wells.  
History and Constitution of the United States . . . . .  
Rhetoric . . . . .
2. German, Wilhelm Tell or Jungfrau von Orleans . . . . . Schiller.  
Zoölogy . . . . . Tenney.  
Physiology . . . . . Hitchcock.
3. German Composition, Faust . . . . . Goethe.  
Geology . . . . . Dana.  
Painting or Music—voluntary . . . . .

*Senior Year.*

1. Logic . . . . . Tappan.  
Psychology . . . . . Hickok.  
Elocution . . . . . Allen.  
Painting or Music—voluntary . . . . .
2. Ethics . . . . . Lectures.  
Universal History . . . . . Weber.  
Law . . . . . Woolsey.
3. Æsthetics . . . . . Lectures.  
Theology . . . . . Lectures.  
History and Philosophy of Civilization . . Lectures.

## PHILOSOPHICAL OR SCIENTIFIC COURSE.

*Freshman Year.*

1. Algebra, completed . . . . . Loomis.  
French, commenced . . . . . Fasquelle's Grammar.  
Natural Philosophy . . . . . Quackenbos.



2. Plane Geometry . . . . . Davies' Legendre.  
     French, continued, Grammar and Reader, Fasquelle.  
     Physical Geography . . . . .
3. Solid Geometry and Plane Trigonometry, Davies' Legendre.  
     French, Picciola or Corinne, Grammar,  
         continued . . . . . Fasquelle.  
     Botany . . . . . Wood.

*Sophomore Year.*

1. Ancient or Modern Language, or Spherical  
     Geometry and Conic Sections . . . . . Davies' Legendre.  
     German, commenced . . . . . Comfort.  
     French, Racine, Grammar completed . . . . . Fasquelle.
2. Astronomy . . . . . Loomis.  
     German, continued, Grammar and Reader, Comfort.  
     French, Louis XVI., Grammaire Francaise, Chapsal et Noel.
3. German, Review of Grammar, Reader  
     completed . . . . . Comfort.  
     Ancient or Modern Language, or Survey-  
         ing and Navigation . . . . . Robinson.  
     Universal History . . . . .

*Junior Year.*

1. Chemistry . . . . . Wells.  
     History and Constitution of the United  
         States . . . . .  
     Rhetoric . . . . .  
     German, Wilhelm Tell or Jungfrau von  
         Orleans . . . . . Schiller.
2. Zoölogy . . . . . Tenney.  
     Physiology . . . . . Hitchcock.  
     Analytical Geometry, or one of Languages, Robinson.
3. German Composition, Faust . . . . . Goethe.  
     Geology . . . . . Dana.

*Senior Year.*

1. Logic, begun . . . . .  
     Psychology, begun . . . . . Hickok.  
     Elocution . . . . .  
     Ancient or Modern Language, or Differen-  
         tial or Integral Calculus . . . . . Robinson.

2. Ethics ..... Lectures.  
     Logic, completed.....  
     Law..... Woolsey.
3. *Æsthetics* ..... Lectures.  
     Theology ..... Lectures.  
     History and Philosophy of Civilization... Lectures.

#### COURSES OF INDUSTRIAL MECHANICS.

I. A course in Mechanical Drawing, continuing through one year, and open to all students without restriction.

First Term—Elementary Principles of Mechanical Drawing, Perspective.

Second Term—Perspective continued, Architectural Drawing.

Third Term—Machine Drawing.

II. A Course extending through two years, followed by a Diploma bearing the seal of the University.

#### *Requirements for Entrance.*

Same as for the Scientific Course, together with the Mathematical studies of the Freshman year.

#### *First Year.*

##### FIRST TERM:

1. Trigonometry.
2. Physics..Silliman.
3. Elements of Mechanical Drawing, Perspective.

##### SECOND TERM:

1. Analytical Geometry.
2. Physics continued.
3. Perspective continued, Architectural Drawing.

##### THIRD TERM:

1. Calculus.
2. Physics completed, Mechanics begun..Peck.
3. Machine Drawing.

#### *Second Year.*

##### FIRST TERM:

1. Mechanics completed.
2. Descriptive Geometry, with Drawings.
3. Mechanism and Machinery of Transmission..Fairbairn.

[Transmission of motion by Link-work, Wrapping connectors, Wheel-work, Sliding contact, Wheels and Pulleys, Toothed Wheels, Spur-Gearing, Pitch of Wheels, Teeth of Wheels, Bevel Wheels, Skew Bevels, Worm and Wheel, Strength of Teeth, Strength and Proportions of Shafts, Couplings, Disengaging and Re-engaging Gear, Hangers, Plummer Blocks, etc., Main Shafts.]

**SECOND TERM :**

1. Elementary Application of Mechanics in the construction of Machines..Lectures.
2. Descriptive Geometry completed, Shades and Shadows.
3. Machine Drawing.

**THIRD TERM :**

1. Strength of Materials.
2. Theory of the Construction of the Steam Engine.
3. Machine Drawing, Shading and Tinting.

III. A Course extending through three years, followed by the Degree B. S.

First Year—Same as above.

Second Year—Same as above.

*Third Year.*

**FIRST TERM :**

1. Analytical Geometry of three Dimensions, and application of Calculus in the Theory of Machines.
2. Applied Mechanics..Weisbach.
3. Isometrical Drawing.

**SECOND TERM :**

1. The Mechanical Theory of Heat.
2. Applied Mechanics continued.
3. Machine Drawing, from Models.

**THIRD TERM :**

1. Applied Mechanics completed.
2. Machine Drawings, Original Designs.

**ELECTIVE COURSE.**

Any student, after matriculation, instead of entering either of the General Courses, may select his or her own. The degree given such as have completed an equivalent to a full course is that which best corresponds to the character of the subjects studied.

## 6. DEGREES.

Those students who have sustained a good moral character, and completed either of the above courses, will be admitted to a degree, after having passed a satisfactory examination.

The degree of Bachelor, or Laureate of Education, will be conferred on those who complete the Normal or Teachers' Course; and the degree of Bachelor of Arts, or Laureate of Arts, on those who complete either of the other courses.

Students completing the three years' course in Industrial Mechanics will receive the degree of Bachelor of Science. Theological students can receive the degree of Bachelor of Arts on completing either of the longer courses, or an equivalent.

## 7. EXERCISES.

The students are exercised weekly in composition, declamation, spelling, pronunciation, etc. Voluntary classes in elocution are formed each term. There are likewise public exercises in reading and speaking original productions, under the supervision of the Professor of Rhetoric and Elocution.

## 8. EXAMINATIONS.

Examinations for entrance have been held at the beginning of each year, and for advanced standing at the opening of each succeeding term. Examinations are also held at the close of each term. These examinations are mostly written.

## 9. MODE OF INSTRUCTION.

In most of the studies recitations are made from text-books, with questions and explanations by the instructor. In some of the higher studies instruction is given by lectures.

## 10. DISCIPLINE.

It is the object of the institution, both in reference to conduct and scholarship of students, to recognize *effort* as well as *achievement*. Hence, in all records, both are taken into account and credit given accordingly. Both the conduct and scholarship thus obtained are entered upon the books of the institution. This bringing into prominence the effort of the student has thus far, in the experience of the institution, proved very satisfactory.

11. INCOME AND EXPENDITURES.

*Income.*

From interest on endowment.....	\$3,827 00
From tuition.....	3,217 27
From other sources .....	1,544 62
Total .....	<u>\$8,588 89</u>

*Expenditures.*

For teaching .....	\$5,741 72
For all other purposes.....	2,847 17
Total .....	<u>\$8,588 89</u>

12. CLOSE OF REPORT.

The following report was presented at a legal meeting of the Trustees, held November 2, 1872, and being accepted by them, it was ordered that it be signed by the proper officers and transmitted to the Regents of the University.

B. F. LANGWORTHY,  
*President.*

MARK SHEPPARD,  
*Secretary Board of Trustees.*

XIV. INGHAM UNIVERSITY, LE ROY, GENESEE CO.

*To the Regents of the University of the State of New York :*

The Councilors of Ingham University, in compliance with the requisition of your Board, submit the following report for the year ending June 19, 1872.

1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

1. Intellectual and Moral Philosophy.
2. Ancient Languages and Literature.
3. Modern Languages and Literature.
4. Rhetoric, History and English Literature.
5. Mathematics and Astronomy.
6. Natural Sciences and Natural Philosophy.
7. Music, Vocal and Instrumental.
8. Fine Arts, Drawing, Painting and Design.

2. COUNCILORS, FACULTY AND OTHER OFFICERS.

The following is the list of the Councilors of the University, with their respective places of residence :

Rev. Samuel D. Burchard, D. D., Chancellor, New York city.

Hon A. P. Hascall, Le Roy.

Oliver Allen, Esq., Wheatland.

John R. Olmstead, Esq., Le Roy.

Rev. J. E. Nassau, D. D., Warsaw.

Hon. Levi A. Ward, Rochester.

Hon. Augustus Frank, Warsaw.

Rev. Joseph R. Page, East Avon.

Geo. W. Tift, Esq., Buffalo.

Rev. Levi Parsons, Mount Morris.

Harrison Osborne, Esq., Le Roy.

Rev. Charles H. Taylor, D. D., Le Roy.

Mrs. E. E. Ingham Staunton, Le Roy.

Rev. Dugald D. McColl, Phelps.

Rev. Isaac N. Sprague, D. D., Geneseo.

Samuel C. Kelsey, Esq., Le Roy.

Josiah Letchworth, Esq., Buffalo.

Rev. L. D. Chapin, Le Roy.

Rev. H. M. Morey, Rochester.  
 Rev. Thomas M. Hodgman, A. M., Byron.  
 Rev. Milton Waldo, D. D., Hornellsville.  
 Hon. John Fisher, Batavia.  
 Dr. R. Williams, Le Roy.  
 Joel Whitney, Esq., Le Roy.

*Officers of the Board.*

Rev. Samuel D. Burchard, D. D., President.  
 Mrs. E. E. Ingham Staunton, A. E., Treasurer.  
 Rev. Wm. L. Parsons, D. D., Assistant Treasurer.  
 Hon. A. P. Hascall, Secretary.  
 Rev. Joseph R. Page, Financial Secretary.

*Faculty.*

The faculty and other officers were as follows:

Rev. Samuel D. Burchard, D. D., Chancellor.  
 Mrs. E. E. Ingham Staunton, Vice-Chancellor, Bible Literature and Social Duties.  
 Rev. Wm. L. Parsons, D. D., Professor of Mental and Moral Science, Logic and Political Economy.  
 Mrs. Lucy A. Parsons, A. E., Classification, Rhetoric, History and English Literature.  
 Prof. Joel Whiting, Latin Language and Literature.  
 Miss Rhoda E. Mead, A. E., Modern Language and Literature  
 Miss Emma L. Parsons, A. E., and Miss Josie Y. Bell, Mathematics and Academic Studies.  
 Miss Frances B. Hill, A. E., Preparatory Department.  
 Mrs. Julia W. Davison, Health and Domestic Department.

*Department of the Arts.*

Mrs. E. E. I. Staunton, A. E., Director of the School of Art.  
 Miss Emma Peck, Drawing, Crayoning and Oil Painting.  
 Mrs. L. A. Parsons, A. E., Art Criticism.  
 Prof. Henri Appy, Vocal Music and Vocalization.  
 Mrs. C. S. P. Cary, A. E., Miss Hattie L. Clark, A. P., and Miss Maggie R. Innis, A. P. M., Instrumental Music.

3. NUMBER OF STUDENTS.

The whole number of students in all the departments of the University during the year was 158; the whole number in the College

classes was forty-two ; the number in the graduating class was nineteen, including nine graduates in Art.

#### 4. CLASSIFICATION OF STUDENTS.

We have four classes, corresponding to the four classes in College, with the following names and numbers :

Palmarians (Seniors), including graduates in Art .....	19
Amplians (Juniors).....	8
Cardians (Sophomores).....	8
Novians (Freshmen). ....	16
Total.....	51

In the Art Department, more or less pursuing other branches..	124
In the Preparatory and Academic Departments .....	74
In Miscellaneous studies .....	19

#### 5. ACADEMIC DEGREES.

Nineteen young ladies of the graduating class received their diplomas, conferring upon them the degrees to which they were entitled. The honorary degree of A. P. P. was conferred upon Miss Emma Peck, a member of the present Faculty.

#### 6. COLLEGE TERMS.

We have two sessions of twenty weeks each, with no regular vacation till the close of the year. The first term began September 14th, the second, February 1st ; Annual Commencement Wednesday, June 19th.

#### 7. COURSE OF STUDY.

The problem of a course of study, the best possible in its adaptations to secure the true type of female development and character, is, perhaps, yet unsolved. Recognizing the demand of society and of woman's nature for a style of elegant culture, less restricted than that of the other sex and somewhat peculiar, we, with our co-laborers in other institutions, are directing our efforts to secure the highest practicable results.

It is, as yet, easier to prescribe a thorough curriculum of study than to interest any large number of young ladies to devote the time and labor required to master it ; easier than to induce parents to urge it upon their daughters as upon their sons.



With the design of advancing as rapidly as possible to our ideal standard, we have a four years' course of study corresponding essentially to the undergraduate course in our colleges for the other sex; allowing, in certain circumstances, modern languages as a substitute for the higher classics, and an advanced pursuit of mathematics and the sciences as a substitute for the Greek. A fifth year of study accomplishes the whole, secures a completed course and the highest honors of the University. We have also a "Literary Course" of three years, in which is embraced a full quota of literary studies, in addition to a shorter course of the languages and mathematics. The object of adopting this course is to make suitable provision for the mass of young ladies, who, destined to fill important places in society, and requiring to be trained with peculiar care, have yet not the taste or adaptation or time for the higher classics and mathematics. Thus, we aim also to rescue a large number from a mere miscellaneous and often unsuccessful method of study, and to secure a tendency to more thoroughness, which, we are happy to find, is the practical result. The diplomas awarded correspond to the amount of study achieved.

#### DEPARTMENT OF THE ARTS.

Believing in the great possibilities of women as artists, and in the desirableness of art as a means of culture, the institution aims to realize for its pupils the advantages of schools devoted exclusively to Art studies.

The School of Drawing, Painting and Design, originating in the genius and labors of an able and successful artist, the late Colonel Phineas Staunton, we believe is entitled to rank among the very first of its kind in our country. To secure the best possible results to our students, a beautiful fire-proof Conservatory of Art has been erected, with a gallery constructed on the most approved plan for artistic effect in the exhibition of pictures. On its walls are suspended the original historical and religious compositions of Colonel Staunton, "The Ascension," "The walk to Emmaus," "The Miracle at Gadara," "Henry Clay and his Contemporaries in the United States Senate," the most prominent of his works, together with a large number of his minor compositions, portraits and landscapes; also, "Charlemagne," a historical painting by Clara Oenicke; "Job and his Friends," by Ludwig Tiersch, President of the Royal Academy of St. Petersburg; "Hunting Scene," a landscape, by

Carl Jungheim of Dusseldorf, and others of considerable value. The pictures in this gallery are not designed to serve as models for copying, so much as for study and for the culture they cannot fail to effect in those who possess natural taste for art and susceptibility to its power.

The studios arranged for practice contain large collections of drawings and casts from the antique and modern, for the study of figures with reference to anatomical accuracy. For pre-Raphaelite studies, selections of plants and flowers are made from an extensive garden and green-house, and of birds and animals from the Museum of Natural History. It is the aim of the school to teach art to its students, and not merely to supply them with pictures. They are, therefore, as soon as the manual culture is sufficient, placed under the tuition of Nature, as the great teacher, and set to the study of her works as the standard models for imitation; passing, in the School of Drawing and Crayoning, from the simple to the difficult, and thence onward to the School of Painting and Design. In this way the mere copying of pictures becomes a matter of slight importance, easily accomplished when better work is not at hand. But the selection and arrangement of objects, with the study of effects in harmony and contrast of colors, light and shade, and effective grouping, give a far higher culture—the true aim and object of Art.

#### SCHOOL OF MUSIC.

This department has been thoroughly reorganized, under the direction of professors of the highest character. While, in general, the conservatory plan is adopted, it is believed that pupils cannot become accomplished musicians if taught technics merely in classes. In order, therefore, to acquire a fine execution and a polished style, each student is subjected to careful and thorough personal training.

As a further means of securing confidence and success, a weekly review is maintained, at which pupils are called upon to play in presence of the class. A mutual and kindly criticism, tending to the correction of faults and peculiarities, and inducing a habit of careful and discriminating observation, all important to the prospective teacher or performer of music, is encouraged and enjoyed.

In addition to private lessons and weekly reviews, the pupils are also classed and instructed in the theory and principles of music as a science, from the simple vibration of a string to those higher laws which govern musical composition. Blackboard exercises, in the

varieties of time, accent, scales, ornament, modulation and transpositions, are given to these classes, qualifying them to analyze and more perfectly appreciate and render the best music.

In the study of voice, similar methods are pursued, with careful adaptation to each student. In this department, we have secured the services of Professor Henri Appy, director of the Rochester Academy of Music. Twenty years' experience in training that most wonderful of all musical instruments, the human voice, enables him to bring from it, as from his violin, that most desirable quality, purity of tone.

A musical library is supplied for the use of students, and especially for those who are candidates for graduation. A large hall, constructed upon acoustic principles, and furnished with superior instruments, is in daily use for vocal and instrumental practice, as well as for occasional musical entertainments.

The instrumental course of study consists of selections from the following text-books and studies:

Plaidsy's Technical Studies; Czerny's Op., 139; Czerny's School of Velocity, four books; Czerny's Op., 337, 740, six books; Duvernoy's Fifteen Studies in Mechanism; Heller, 16, 45, 46; Krause, Op., 2, 4; Clement's Preludes and Exercises; Clement's Gradus ad Parnassum; J. S. Bach, Preludes and Figures; J. S. Bach, Inventions; Moscheles, Op., 70, 73, 95; Hawsett, Op., 2, 5; Chopin, Op., 10, 25; Cramer's Studies, two books; Thalberg's Art die Chant; Thalberg's Studies, Op., 26. *Thorough Bass*, A. N. Johnstone. *Harmony*, E. F. Richter, A. N. Johnstone, Weber's Theory of Musical Composition. *Organ*, Zundel's Organ School, Schneider's Organ School. *Vocal Music*, Concone's Exercises, Exercises by the Professor.

#### COMMERCIAL DEPARTMENT.

The University aims to qualify young ladies thoroughly for book-keeping, and for the independent transaction of any kind of business to which they may be called.

The following are the studies pursued by the several classes:

##### *Novian Class.*

*First Term.* Virgil, with grammar and exercises; or, instead, French and German begun; Physiology; Algebra; Ancient History, with illustrative readings from Ancient Literature, and notes.

*Second Term.* The same four studies continued, Modern History taking the place of Ancient; lectures, written and practical exercises and scanning being added.

*Cardian Class.*

*First Term.* Cicero's Orations against Catiline; or, instead, French and German, with dictations and recitations; Davies' Legendre, plane, solid and spherical; Rhetoric; Natural Philosophy.

*Second Term.* Cicero's pro Archia and selections; or, instead, French and German Literature; Trigonometry, plane and spherical; Botany, with illustrations and exercises; Chemistry.

*Amplian Class.*

*First Term.* Livy and Greek begun; or, in the Scientific course, Conic Sections and Silliman's Physics; Evidences of Christianity; Philosophy of History, in lectures.

*Second Term.* Horace, Odes, Satires and Ars Poetica, with scanning in various meters; Greek Testament; or, in the Scientific course, Silliman's Physics; Geology; Book-keeping.

*Palmarian Class.*

*First Term.* Hickok's Mental Science, with lectures; Shaw's and Gilman's English Literature, with illustrative readings from standard authors; Political Economy; Whately's Logic.

*Second Term.* Greek, Xenophon and Homer; or, in the Scientific course, Olmsted's Astronomy; Samson's Art Criticism, with references to Rankin, Bascom and others; Moral Science; Butler's Analogy.

Lectures on the Legal Rights of Women, and on the Science of Government, are given by Dr. Parsons during the year.

8. EXERCISES.

All the pupils are assigned to classes, which meet weekly for exercises in English composition. Written exercises of some description are required of each pupil every week, and, in addition, an original essay every third week. These are corrected, read and criticised, either in classes or before the assembled school and Faculty. Writing is also exacted, more or less, in connection with various studies.

Wednesday of each week is given to these and other exercises, designed to supplement the daily lessons, and to make the course of instruction complete. The morning is given to reviews in all the elementary studies, generally continued to the Senior year. The more advanced pupils are occupied, the first term, in readings in Ancient Literature and the English Classics, especially Shakespeare,

with criticisms and discussions, and written analyses, and a course of lectures on the Legal Rights of Women. The second term, these are succeeded by Domestic Economy, Normal Training, English Classics continued, and lectures on the Science and Forms of Government. Special attention is given to Vocal Music on that day.

At the opening of each daily session, half an hour is appropriated to devotional exercises, to biblical and such other moral and practical instruction as is adapted to the known necessities of the pupils. All the members of the school family are embraced in Bible classes held each Sabbath afternoon. A religious service is held in the evening for those of the family who do not attend church. The pupils, with few exceptions, are thoroughly drilled in gymnastic exercises at least four hours each week.

#### 9. EXHIBITIONS AND PRIZE CONTESTS.

The two Societies give each a public literary entertainment during the school year, and on the evening before Commencement a united one, consisting of Essays, Discussions, Colloquies, Recitations, etc. An annual address before the two Societies, by a gentleman of literary reputation, is a part of the programme of Commencement week.

#### 10. EXAMINATIONS.

On the completion of the studies of each term, a thorough examination of the classes is had in the presence of the school, the Faculty, and such parents and other visitors as choose to be present. A satisfactory examination is made the condition of the advancement of the pupil in her course toward graduation.

#### 11. MODES OF INSTRUCTION.

Lessons are given from the text-books, and each student is required to master the teachings of the author. It is the further aim of the teachers, by conversation, illustration, lectures and experiments, to make the pupils independent of the text-books, and to lead them to apprehend the truth of what they learn by the insight of their own minds. Where the subject makes it important, notes and abstracts are required of the learner.

#### 12. DISCIPLINE.

The kind and affectionate personal influence of the section teachers and matron, with the co-operative authority of the Faculty, has been

generally found sufficient to secure the good order of the school. We aim to develop the controlling power of reason and conscience in a manner to obviate the necessity of more stringent measures in the administration of school government. The expulsion of a pupil has rarely been found necessary.

### 13. GRATUITOUS AID.

The institution has no funds from which such aid can be granted. Worthy young ladies, of moderate means, yearning for educational advantages, are, however, sometimes aided by a larger or smaller deduction from their term bills. Over a thousand dollars were so deducted during the year here reported.

### 14. STATUTES AND BY-LAWS.

A few simple and obviously just rules, demanded by the common good, have answered all the purposes of more formal statutes.

### 15. DESCRIPTION AND VALUE OF COLLEGE BUILDINGS.

The institution has one large University building, the lower story of which furnishes the necessary school and recitation rooms, and the upper story affords a large audience room, and for gymnastics and music classes, and for Commencement exercises. Then, there are four connected buildings, reaching each way from a large three-story structure, arranged for educational work. In these buildings we have suitable rooms for about one hundred young ladies: parlors, dining room, laundry; two large society rooms, with their libraries and appropriate furniture; music rooms, cabinet hall, studios and art gallery. These buildings are connected with the beautiful cottage occupied by the Vice-Chancellor and her family, by a large conservatory of plants, and a covered arbor two hundred feet in length, used by the pupils for exercise in stormy weather. Recently, Mrs. Staunton has erected a beautiful stone, fire-proof edifice, as a memorial to her husband, for the use of the University, and which is known as the "Staunton Conservatory of Art and Science." The Conservatory is a substantial and ornamental structure, forty feet by fifty, two stories high, with a three-story tower in front. The lower room is appropriated to the various casts, cabinets and curiosities illustrative of the natural sciences. The specimens are deposited in glass cases, and so arranged as to make their inspection and study most convenient. The upper story, lighted from the roof, is constructed into an

ample gallery for the proper exhibition of our numerous and valuable oil paintings.

Two acres of ground have recently been purchased for the University, on which there is a dwelling-house suitable for residence. This ground lies next east of the University building and is valued at four thousand dollars.

The present value to the University of the buildings heretofore reported, together with the purchase above

referred to, we estimate at.....	\$45,000 00
The present value of the grounds at.....	10,000 00
The present value of the Cottage property occupied by the Vice-Chancellor and family, at.....	10,000 00
The Conservatory of Art and Science.....	15,000 00
	<hr/>
	\$80,000 00

#### 16. OTHER PROPERTY IN USE FOR SCHOOL PURPOSES.

Libraries of the University and of the societies .....	\$3,500 00	
Furniture and fixtures in school rooms and boarding-house .....	12,000 00	
Musical instruments in use.....	6,000 00	
Chemical and philosophical apparatus, costing originally .....	1,500 00	
Cabinet of minerals.....	1,500 00	
South American collection of birds, reptiles, Indian curiosities, and other valuable specimens, gathered on the equatorial line, by the expedition led by the late Col. Staunton and by Professor Orton, of Vassar College.....	4,000 00	
Oil paintings and models used in the Art Department.....	15,000 00	
	<hr/>	43,500 00
		<hr/>
		\$123,500 00
		<hr/>

#### 17. REVENUES.

Receipts from tuition.....	\$5,924 10	
Receipts from board bills.....	14,473 52	
	<hr/>	\$20,397 62
		<hr/>



## XV. ST. STEPHEN'S COLLEGE, ANANDALE, DUTCHESS COUNTY.

*To the Regents of the University of the State of New York :*

The Trustees of St. Stephen's College, Anandale, in compliance with the requisitions of the Regents of the University, submit the following report for the last collegiate year ending July 11, 1872, being the day of the Annual Commencement, containing a true and just statement of facts showing the progress and condition of said College during and at the close of said year in respect to the several subject-matters following, viz. :

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships have been defined by the trustees only as they have been filled by the appointment of professors.

## 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The Rt. Rev. Horatio Potter, D. D., LL. D., D. C. L., Oxon, *ex officio* Visitor.

The Hon. John V. L. Pruyn, LL. D., Chairman of the Board.

James F. De Peyster, Esq., *ex officio*.

The Rev. John Ireland Tucker, D. D.

Mrs. Margaret J. Bard.

John Bard, Esq.

John L. Aspinwall, Esq., Treasurer.

Henry W. Sargent, Esq.

William A. Davies, Esq.

Thomas W. Ogden, Esq.

Cyrus Curtiss, Esq.

John W. Mitchell, Esq.

The Rev. R. B. Fairbairn, D. D., *ex officio* Secretary.

Stephen P. Nash, Esq., *ex officio*.

The Rev. William F. Morgan, D. D.

Joseph Harrod, Esq.

John Campbell, Esq.

The Rt. Rev. A. N. Littlejohn, D. D.

The Rev. George F. Seymour, D. D., *ex officio*.

The Rt. Rev. William Cresswell Doane, D. D.



The Rev. Francis Vinton, D. D., D. C. L.

The Rev. Henry C. Potter, D. D.

The Rev. Charles H. Hall, D. D.

The Rev. William A. McVickar, D. D.

There were present at the annual meeting Bishop Potter, Bishop Doane, the Hon. J. V. L. Pruyn, the Rev. Drs. Seymour and Fairbairn, and Messrs. Aspinwall, Davies, Nash and Harrod.

### *The Faculty.*

The Rev. Robert B. Fairbairn, D. D., Warden and Professor of Moral Philosophy.

The Rev. George B. Hopson, M. A., Professor of the Latin Language and Literature.

The Rev. Andrew Oliver, D. D., Professor of the Greek Language and Literature, and of the Hebrew Language.

The Rev. William W. Olssen, M. A., Professor of Mathematics and Natural Philosophy.

The Rev. R. B. Fairbairn, D. D., Acting Professor of Logic and Mental Philosophy.

The Rev. Charles A. Foster, M. A., Acting Professor of the English Language and Literature, and of History.

James Stryker, M. A., Assistant Professor of Greek.

William H. Tomlins, Librarian.

There are two janitors, a matron and nine servants.

### 3. NUMBER OF STUDENTS.

The whole number of students during the year was seventy-six. There were seventy-two at the beginning of the Academic year; four withdrew and four others took their place, making the number present throughout the year seventy-two.

### 4. CLASSIFICATION OF STUDENTS.

Seniors .....	5
Juniors.....	14
Sophomores .....	11
Freshmen.....	12
Partial course.....	6
Introductory class.....	24
<b>Total .....</b>	<b>72</b>

## 5. COMMENCEMENT.

The Commencement was held on the 11th of July. Five received the degree of B. A. and seven the degree of M. A., *in course*; no other degrees were given.

## 6. COLLEGE TERMS OR SESSIONS.

The College year is divided into three terms; the *first* beginning October 1, and ending December 22; the *second* beginning January 3, and ending April 13; the *third* beginning April 20, and ending July 11.

## 7. COURSE OF STUDY.

The course of study is the same as reported in 1869; it has been pursued as follows:

The Freshman class have read the third and fourth books of Quintus Curtius, Cornelius Nepos with Arnold's Exercises, and the twenty-first book of Livy; they have read in Greek, forty chapters of Herodotus, four books of Odyssey, and the Gospel of St. John in Greek. They have studied Loomis' Algebra from quadratic equations to the end of the treatise, and Loomis' Geometry from the fifth book to the end; they have read Quackenbos' Rhetoric; they had also an exercise each week in Latin, and in Greek Composition, and in the History of Rome. They also had an exercise each Saturday morning in composition, in reading and in declamation.

The *Sophomore class* read nearly the whole of Horace, and one and a half books of the Annals of Tacitus, with an exercise each week in Latin Composition and Roman History. In Greek, they read the first book of Xenophon's Memorabilia, forty-eight chapters of the third book of Thucydides and the Alcestis of Euripides, and the Gospel of St. Luke and the Acts, with an exercise each week in Greek Prose Composition and in the History of Greek. In Mathematics, Plane and Spherical Trigonometry, Mensuration, Surveying and Navigation, and Loomis' Analytical Geometry. With the Professor of English, they have read Harrison on English Language. They have had an exercise on every Saturday morning in reading, in composition, and in declamation.

The *Junior class* have read Jevon's Logic, and Campbell's Philosophy of Rhetoric; they have also read the History of England to the Reformation. In Latin, they have read the whole of Juvenal and Cicero de Natura Deorum, and an exercise each week in Latin Com-

position. In Greek, they have read the *Electra* of Sophocles, thirty-four chapters of Plato's *Gorgias*, and the *Epistles* to the Galatians, Ephesians and 1st Corinthians, with an exercise each week in Greek Composition. They have studied Snell's *Olmsted's Natural Philosophy*—the whole, Loomis' *Treatise on Astronomy*, and Brocklesby's *Meteorology*. They have had an exercise each week in reading, in composition, and in declamation; the declamations being written by themselves.

The *Senior Class* have read in Mental Philosophy nearly the whole of Porter's *Treatise*, and in Moral Philosophy Whewell's *Elements of Morality*, and the *Ethical Discourses* of Bishop Butler. A number of lectures have also been delivered to the class on subjects connected with these two branches of Philosophy. They have studied Yonmans' *System of Chemistry*. They have also read *Landmarks of Ancient History* and a *System of Biblical Geography*. In Latin, they have read the whole of Cicero *de Officiis*. In Greek, they have read the Gospels and the Acts, with Winer's *Grammar*, paying particular attention to Hellenistic Greek. In Hebrew, they have read two chapters of Genesis, with recitations in Fregelle's *Heads of Hebrew Grammar*. They have attended a course of lectures by the Professor of Mathematics on Geology, including so much of the classification and Comparative Physiology of Plants and Animals as is necessary to explain the progression in the types of animal and vegetable creations exhibited in fossil remains. They have also read Kames' *Elements of Criticism*. They have also attended each Saturday morning an exercise in reading, in composition and in declamation; the declamations being original.

The *Preparatory Classes* have studied the Latin and Greek authors and Mathematics which have been prescribed by the Convocation as preparatory to the Freshman class.

#### 8. EXERCISES.

The exercises have been named in the above article.

#### 9. EXHIBITIONS AND PRIZES.

There are prizes given the first scholar in Latin, in Greek, in Mathematics, in Natural Philosophy and Astronomy, in Logic, in Metaphysics, in Ethics, in Hebrew, in Hellenistic Greek and in Elocution. The names of the prize men are published, year after year, in the catalogue. The first man of the graduating class is marked *primus*, provided the marks for his whole college course are above

ninety-five, and the second *secundus*, provided his marks for the whole course are above ninety.

#### 10. EXAMINATIONS.

Public examinations are held at the end of each term. At the end of the first and second terms, they are conducted mostly in writing. At the end of the summer term, before the Commencement, they are oral. Only those marked seventy-five, on a scale of 100, are declared to have sustained them.

#### 11. MODE OF INSTRUCTION.

Instruction is given by means of daily recitations from text-books, and by lectures by the Professor in the class room.

#### 12. DISCIPLINE.

The discipline is administered by the Warden, assisted by the Professors, and is intended to be mild and parental.

#### 13. GRATUITOUS AID.

There are no charges made in this College for tuition and room rent. Each student pays \$225, which is the cost of board, washing, fuel and lights.

#### 14. STATUTES AND BY-LAWS.

The Trustees have adopted no statutes or by-laws, but have left to the Faculty of the College the enforcement of such laws and rules of discipline as they may deem proper.

#### 15. DESCRIPTION AND VALUE OF BUILDINGS, ETC.

Twenty-three acres of land, valued at .....	\$11,420
College Chapel and furniture .....	34,000
School-house .....	5,000
Janitor's house.....	1,000
College building—south wing.....	16,000
Furniture in College building.....	6,500
New College .....	4,200
Volumes in Library, valued at .....	3,000
Apparatus .....	400
Ludlow and Willink Hall.....	53,000
Ice-house .....	800
	<hr/>
	\$135,320
	<hr/>

## 16. DEBTS.

The only debt of the College is a mortgage on the estate of \$1,000.

## 17. REVENUE.

This College has no endowment, but relies at present on annual contributions.

From two Trustees.....	\$2,000
From Society for Promotion of Religion and Learning....	3,500
From other sources.....	2,500
	<hr/>
	\$8,000
	<hr/>

## 18. INCOME AND EXPENDITURES.

From annual contributions.....	\$8,000
From annual payment of students.....	15,300
	<hr/>
	\$23,300
	<hr/>

Salaries of Professors.....	\$7,500
Maintenance of College.....	15,300
	<hr/>
	\$22,800
	<hr/>

## 19. CLOSE OF REPORT.

This report is made by members of the Executive Committee authorized to do so by resolution of the Board of Trustees, adopted at an annual meeting.

R. B. FAIRBAIRN,  
*Secretary of the Board.*

JNO. L. ASPINWALL.

ANANDALE, N. Y., Dec. 2, 1872.

## XVI. COLLEGE OF ST. FRANCIS XAVIER, NEW YORK CITY.

*To the Regents of the University of the State of New York:*

The Trustees of the College of St. Francis Xavier, in compliance with a requisition of the Regents of the University, submit the following report for the last collegiate year ending on the 24th day of June, 1872, being a just and true statement of facts showing the progress and condition of said College, during and at the close of said year, in respect to the several subject-matters following, viz.:

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in said College during said year, as established by the Trustees, were the following:

1. Ethics, Astronomy and Chemistry.
2. Logic, Metaphysics, Psychology and Natural Theology.
3. Physics and Mathematics.
4. Chemistry and Natural History.
5. Rhetoric and General Literature.
6. Belles-Lettres.
7. Classics.
8. History and English Composition.
9. Elocution.
10. Geometry and Algebra.

### 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The following is a list of the Trustees of the College, with their respective places of residence:

Very Rev. John Bapst, President of the Board, 49 West Fifteenth street.

Rev. Michael Driscoll, Troy, N. Y.

Rev. Charles H. De Luynes, 49 West Fifteenth street.

Rev. Henry Duranquet, Secretary, 49 West Fifteenth street.

Rev. Maurice Ronayne, 49 West Fifteenth street.

Rev. Henry Hudon, Treasurer, 49 West Fifteenth street.

Rev. Louis Jouin, Fordham, N. Y.

Rev. Paul Mignard, 49 West Fifteenth street.

Rev. James Perron, 49 West Fifteenth street.

Rev. Joseph Shea, Fordham, N. Y.

Rev. Theodore Thiry, 49 West Fifteenth street.

Rev. Joseph Durthaller, Yorkville.

Rev. David Merrick, 49 West Fifteenth street.

Rev. Patrick F. Dealy, 49 West Fifteenth street.

The last annual meeting of the board was held on the 7th day of November, at which the following Trustees were present, viz.:

Rev. Henry Hudon, Chairman.

Rev. Charles H. De Luynes.

Rev. Henry Duranquet, Secretary.

Rev. Paul Mignard.

Rev. Theodore Thiry.

Rev. Joseph Durthaller.

Rev. David Merrick, Treasurer.

Rev. Patrick F. Dealy.

Three other meetings were held during the year on the following days: On the 15th day of February, 1872; on the 15th day of March, 1872; on the 29th day of June, 1872.

The Faculty of said College, including all persons charged with the duty of giving instruction therein during said year, consisted of a President, Vice-President, and seven Professors for the Undergraduate course, and eighteen for the Grammar, Commercial and Preparatory courses; in all, twenty-five professors or tutors.

The other officers of said College, charged with duties therein, other than those of public instruction during said year, were a Prefect of Discipline, a Treasurer, a Chaplain and a Librarian.

The names of the several persons holding offices or places in said College during said year, with the offices or places held by them respectively, and the salaries or annual compensation allotted to them for official services, were as follows:

Names of Persons.	Professorship or other Office held.	Salary.
Rev. H. Hudon .....	President.	
Rev. F. Casseau .....	Vice-President, Prefect of Studies and Chief Disciplinarian.	
Rev. J. Perron .....	Treasurer.	
Rev. T. Thiry .....	Chaplain.	
Rev. C. De Laynes .....	Librarian.	
Mr. W. Pardow .....	Assistant Prefect of Studies and Discipline; Librarian of the Students' Library.	
Rev. G. Friderich .....	Professor of Logic, Metaphysics, Ethics and German.	
Mr. S. Friesbe .....	Professor of Physics, Mathematics, Mineralogy, Botany and Mechanics.	
Mr. C. Desjardins .....	Professor of Chemistry.	
Rev. M. Ronayne .....	Professor of History and Evidences of Religion; President of the Debating Society.	
Rev. P. Dealy .....	Director of the Alumni Sodality.	
Mr. P. Caseldy .....	Professor of Rhetoric and Elocution.	
Mr. J. Casey .....	Professor of Belles-Lettres, Geometry and French.	
Mr. F. Smith .....	Professor of Classics, Algebra and French.	
Rev. J. Cunningham .....	Professor of Introductory Class.	
Mr. J. Jerge .....	Professor of First Grammar Class, Algebra and German.	
Mr. J. Prendergast .....	Professor of Second Grammar Class.	
Mr. R. McTammany .....	Professor of Third Grammar Class.	
Mr. F. Renand .....	Prefect of the Commercial and Preparatory Courses.	
Mr. J. Dowdle .....	Professor of Penmanship.	
Mr. R. McGinley .....	Professor of Rudiments.	
Mr. J. Melanephy .....	Professor of Rudiments.	
Mr. J. Reddan .....	Assistant Prefect of Commercial Course; Teacher of Arithmetic and French.	
Mr. J. O'Neill, LL. B. ....	Professor of Commercial Law.	
Mr. A. Reilly .....	Professor of First Commercial Class.	
Mr. C. O'Neill .....	Professor of Second Commercial Class.	
Mr. T. McDonough .....	Professor of Third Commercial Class.	
Mr. W. Boddy .....	Teacher of First Preparatory Class.	
Mr. T. Wentworth .....	Teacher of Second Preparatory Class.	
Mr. F. Durand .....	Teacher of Third Preparatory Class.	
Mr. J. O'Leary .....	Teacher of Fourth Preparatory Class.	
Prof. T. Chevalme .....	Professor of French.	
Prof. P. Oeker .....	Professor of German.	
Prof. A. Herrera .....	Professor of Drawing and Penmanship.	
Prof. F. Simon .....	Professor of Vocal Music.	

For, were are mentioned by the Treasurer at \$8,500 for the year.

compensation, in addition, during said year, amounted in the aggregate to \$4,650.

### 3. NUMBER OF STUDENTS.

The whole number of students, undergraduates, in said College during said year, was. .... 90

Left College during said year. .... 11

Remaining at close of said year. .... 79

tes at the Annual Commencement, held on 12, was twenty-three.

in said College, during said year, who 38, was. .... 357

..... 140

..... 95

..... 122

..... 357

year. .... 83

year, undergraduates, as stated above, 274



The average age of the graduates was about twenty ; the minimum was seventeen and the maximum was twenty-two.

The average age of the undergraduates was seventeen; the minimum was fourteen and the maximum was twenty. Most of the graduates intended to pursue a professional career.

#### 4. CLASSIFICATION OF STUDENTS.

The students who were undergraduates in said College during said year, were classified as follows, viz. :

First class or Philosophy.....	10
Second class or Rhetoric.....	21
Third class or Belles-Lettres.....	27
Fourth class or Classics .....	32
	<hr/>
	90
	<hr/>

This division corresponds to the appellations of Seniors, Juniors, Sophomores and Freshmen, adopted elsewhere.

The students who were not undergraduates in said College during said year, were classified as follows, viz. :

Introductory class.....	27
First Grammar class.....	21
Second Grammar class.....	26
Third Grammar class, 1st section.....	34
Third Grammar class, 2d section.....	32
First Commercial class.....	27
Second Commercial class.....	34
Third Commercial class.....	34
First Preparatory class.....	42
Second Preparatory class.....	36
Third Preparatory class.....	27
Fourth Preparatory class.....	17
	<hr/>
In all, as above stated ...	357
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#### 5. COMMENCEMENT EXERCISES.

The following is a copy of the programme of the last Commencement :

## A. M. D. G.

TWENTY-SECOND ANNUAL COMMENCEMENT, JUNE 24, 1872, AT 7½ P. M.

*Order of Exercises.*

## Overture.

Discourse.—The Law of Respect..... J. F. O'Connor.

Chorus.—“Ah! Happy Day” ..... Donizetti.

Discourse.—Social Discord..... F. Wall.

Quartette.—“The Fairy Queen” ..... Verdi.

Discourse.—Education ..... M. Cremin, A. B.

Chorus.—“Hail to Thee, Liberty”..... Rossini.

## Award of Medals and Prizes.

Quartette.—“The Student's Farewell”..... Boieldieu.

## Conferring of Degrees.

Address to the Graduates ..... Rev. J. J. Moriarty (Class of 1861).

Finale.—Singing by the Students, under the direction of Professor F. Simon.

The Degrees conferred were as follows :

The degree of A. M. was conferred on

Michael McSwiggan, Class of 1871.

Michael A. Cremin, Class of 1871.

John McDermott, Class of 1871.

Lawrence J. Boylen, Class of 1871.

Thomas M. Mosher, Class of 1871.

Robert J. McGinley, Class of 1871.

Wm. P. Mubry, Class of 1871.

Jas. F. Kiely, Class of 1871.

John H. Burns, Class of 1871.

Patrick J. Martin, Class of 1871.

Edmund J. Healy.

*Graduates in Course.*

Francis H. Wall, New York.

John F. X. O'Connor, New York.

Patrick J. McCloskey, New York.

Andrew T. Sullivan, Brooklyn.

Wm. J. Brown, New York.

David J. Hickey, New York.

Joseph A. Flanley, New York.

Henry W. Nevin, Brooklyn.

John H. Sullivan, Brooklyn.

Eugene J. Donnelly, Brooklyn.

Aloysius W. Reilly, New York.

Joseph P. Molphy, Westmeath county, Ireland.

In all, as above stated, 23.

#### 6. COLLEGE TERMS.

There were two terms or sessions for studies in said College during said year, the first term beginning on the 4th of September, 1871, and ending on the 8th of February, and the second term beginning on the 9th of February, and ending on the 24th day of June, 1872, that being the day of the Annual Commencement.

There were two vacations during said year, viz.: the Christmas and Easter vacations.

The Christmas vacation began on the 23d day of December, 1871, and ended on the 3d day of January, 1872, and the Easter vacation commenced on the 27th of March, and closed on the 3d day of April, 1872.

The following is a copy of the Calendar for the next collegiate year:

#### 1872.

- Sept. 2. First term, twenty-fifth year begins.
- Nov. 1. All Saints' Day. Holiday.
- Nov. 28. Thanksgiving Day. Holiday.
- Dec. 8. Feast of the Immaculate Conception. Holiday.
- Dec. 23. Christmas vacation begins.

#### 1873.

- Jan. 3. Christmas vacation ends.
- Jan. 27. Semi-annual examination begins.
- Feb. 3. Second term begins.
- Feb. 22. Washington's Birth-day. Holiday.
- Mar. 17. St. Patrick's Day. Holiday.
- April 9. Easter vacation begins.
- April 15. Easter vacation ends.
- June 15. Annual examinations begin.
- June 23. Twenty-third Annual Commencement.
- Sept. 3. First term, twenty-sixth year begins.

#### 7. SUBJECTS OR COURSE OF STUDY.

The Undergraduate course of study in each class of said College during said year was as follows:

*Fourth Class or Classics.*

1. English: Grammar reviewed; Idioms; Versification; Lessons in Composition; Goldsmith's *Traveler* and *Deserted Village* committed to memory.
2. Latin: Grammar reviewed; Idioms; Prosody; reading of Cicero's *Orations* against *Cataline* and the *pro Archia*; Virgil's *Eclogues*; Selections from the *Georgics* and the first book of the *Æneid*.
3. Greek: Syntax and Dialects; written and oral exercises; Xenophon's *Cyropedia*, and first book of the *Iliad*.
4. French: *Telemachus*, select extracts, exercises and translations.
5. History: Fredet's *Modern History*, from Part I to IV.
6. Mathematics: Davies' *University Algebra*.
7. Elementary Astronomy.
8. Elocution: The students of this class attend the weekly course of the Undergraduates.
9. Christian Doctrine: Abbé Gaumè's *Manual* expounded.

*Third Class, or Belles-Lettres.*

1. Lectures five times a week on the principles of *Belles-Lettres*, with explanatory remarks and appropriate citations from ancient and modern authors; Pope's *Essay on Criticism*; Blair's *Rhetoric*.
2. Latin: Reading and literary study of Virgil's *Æneid*; Livy's *Narrations*; Cicero's *Verrine Orations* and *Philippics*; Horace's *Select Odes* and *Poetical Art*.
3. Greek: Plutarch's *Lives*; Demosthenes' *Olynthiacs*; Homer's *Iliad* and Plato's *Phaedo*.
4. French: *Telemachus*, select extracts; *Art Poétique* de Boileau.
5. History: Fredet's *Modern History*, from Part IV to Part VII.
6. Mathematics: Loomis' *Geometry*.
7. Mineralogy, Botany: Text-books, Dana, Tenney.
8. Elocution: Once every week for an hour, with the students of Philosophy and Rhetoric.
9. Christian Doctrine: Abbé Gaumè's *Manual* expounded.

*Second Class, or Rhetoric.*

1. English: Lectures by the Professor five times a week. The principles of Rhetoric are exemplified from ancient and modern authors, and applied in original compositions. The students commit

to memory extracts from Pope's Essay on Man, and Goodrich's Eloquence.

2. Latin: Literary study of Cicero's Orations, pro Ligario, pro Lege Manilia, pro Milone, etc.; Satires of Horace, Persius and Juvenal; and the Agricola and Germania of Tacitus.

3. French: Reading and literary criticism of Cahour's Chefs d'Œuvre d'Eloquence. Extracts from the best French authors.

4. Greek: Demosthenes' de Corona and Philippics; Sophocles' Tragedies, Œdipus Coloneus and Rex, and Hecuba of Euripides.

5. History: Fredet's Modern History, from Part VII down to the present time, with all the necessary developments on the part of the Professor.

6. Mathematics: Plane and Spherical Trigonometry and Analytical Geometry; text-book, Loomis.

7. Geology and Zoölogy.

8. Elocution: One hour weekly with all the other undergraduates.

9. Evidences of Religion: Abbé Gaumè's Manual expounded.

#### *First Class, or Philosophy.*

1. A full course of Mental Philosophy, Logic, General Metaphysics, Cosmology, Psychology and Natural Theology. Text-book: Jouin. The mode of instruction is by lectures of an hour each, delivered in Latin by the Professor. The students are required to prove and defend every expounded thesis against the Professor and others appointed to propose the weightiest objections.

2. Physics: Lectures of an hour each, by the Professor, five times a week; text-book, Snell's Olmsted.

3. Mathematics: Calculus, Differential and Integral; text-book, Loomis.

4. Astronomy: Lectures by the Professor.

5. Chemistry: Lectures illustrated by experiments. Diagrams to explain the technical branches are in readiness.

6. Mineralogy: Geology and Botany; text-books, Dana and Gray.

7. Elocution: Once every week all the undergraduates assemble in the College Hall, and during one hour are exercised in the practice of declamation and criticised by the Professor, who, in his remarks, explains the principles of Elocution.

8. Evidences of Religion: Lectures once every week.

*Post-Graduate Course.*

The Post-Graduate course, which leads to the degree of Master of Arts, occupies one year. It comprises the study of Ethics, Natural Law, and the Law of Nations, and Higher Physics. The mode of instruction is by lectures, once a day for one hour. The students write philosophical essays on the questions expounded, and the most successful competitor receives a gold medal at the Annual Commencement.

## 8. EXERCISES.

A daily exercise in Latin, Greek, French, Mathematics, etc., according to the degree of the class and the branches taught therein, is required of each student. A weekly exercise is given in all the classes above the Preparatory course, the subject-matter being marked out by the Professor.

Every second week, a competition on the subject-matter of the class is held, throughout all the classes. The result of these competitions determines the progress of the student, and decides the annual prize for proficiency.

Once every month an account is given before the Faculty and all the students, of each pupil's behavior and application, and a report thereof is sent to the parents or guardians.

To insure success, private study at home, for two hours and a half in the evening, and half an hour in the morning, is strictly required.

Punctual attendance is earnestly recommended ; hence, in case of absence, a note is required from the parents or guardians, who are also informed of the non-attendance of their children or wards.

The hours of class are from nine o'clock in the morning until a quarter before three in the afternoon.

The younger students of the Preparatory course are allowed to go home at half-past two. The doors are opened at half-past eight A. M. The professors and prefects are then in attendance.

There are in said College two literary societies, viz.:

1. The Xavier Alumni Association, composed of graduates of the institution.

2. The St. Francis Xavier Debating Society. This society holds its meetings every fortnight. The exercises consist in the reading of original essays, and in debates on subjects selected by the President. Membership is confined to the senior students of the University course. The President is appointed by the College Faculty ; the other officers are selected semi-annually by the members.

There is also in said College a Students' Library, containing about 6,000 volumes, embracing varied and useful reading matter, carefully selected. The library is open to the students every day, throughout the academic year, from half-past eight to nine A. M., and from half-past two to half-past three P. M.

#### 9. EXHIBITIONS AND PRIZE CONTESTS.

Two public exhibitions were held in said College during said year; one on the 8th day of February, 1872, and the other on the 24th day of June, being the day of the Annual Commencement.

The following annual prizes were awarded by the Faculty; the expenses thereof being mainly defrayed by the College Treasurer:

1. Three gold medals; the first in the Post-Graduate class; the second in the Graduating class; the third in the Undergraduate course.

These three prizes were private gifts.

2. Five silver medals; two in the Graduating class and three in the Undergraduate course.

3. A series of prizes (books) has been established from the beginning of the institution, to be awarded in every class or section, for every branch of knowledge taught during the year. The most successful competitor carries the prize. The rules which regulate the number of prizes and distinctions in each class or section are as follows:

1. For a class or section having less than twenty students one prize only is given, with a "distinction" or "honorable mention" for every fifth student.

2. For a class or section having twenty students or more, two prizes are given; but the second prize is counted as the first of the "distinctions" or "honorary mentions."

The names of the successful competitors are printed in the annual catalogue.

#### 10. EXAMINATIONS.

There were two examinations during said year; one at the end of January, the other in June, before the Annual Commencement. These examinations were both written and oral, and the promotion to a higher class depended on their result. They proved to be productive of the best results, and excellent means of encouraging emulation.

When a student presents himself for admission to said College, he is privately examined, and is then immediately assigned to that class to which his acquirements entitle him.

11. MODE OF INSTRUCTION.

Instruction in said College is given by lectures, recitations and analysis. The Latin and Greek authors are translated and analyzed fully by the students; the Professors adding whatever they may consider necessary for a thorough comprehension and knowledge of them.

12. DISCIPLINE.

The mild and salutary influence of Religion, with timely and parental advice, were the means employed in said College for obtaining on the part of the students strict propriety of conduct, as far as regards morality and gentlemanly behavior. Deficiencies in studies and in literary exercises were compensated by additional tasks imposed in the College after the usual hours.

13. GRATUITOUS AID.

Education, free of charge, was given during the past year, in said College, to twenty-eight students; the scholarships afforded free education to fifteen students more, while expenses of others were diminished by lessening, in their regard, the price of tuition.

14. STATUTES OR BY-LAWS.

The Board of Trustees deemed it advisable in no respect to limit the powers of the President and Vice-President, and left entirely to their discretion the means they might judge proper for the advancement of studies and the maintenance of discipline. No College laws are in print, with the exception of a brief abstract.

15. DESCRIPTION AND VALUE OF BUILDINGS.

The principal College building is a commodious structure of 120 by sixty feet; it contains an elegant hall, laboratory, cabinet, class rooms, library, etc. There are four other buildings used for College purposes, the whole occupying thirteen city lots.

1. College Hall and Recitation Rooms, valued at....	\$100,000 00
2. Other College buildings and grounds, valued at...	78,000 00
	<hr/>
Carried forward .....	\$178,000 00



Brought forward.....	\$173,000 00
3. College and Students' Libraries, numbering about 16,000 volumes, in a good state of preservation, estimated at.....	15,000 00
4. Chemical and Philosophical Apparatus, Herbarium, Collection of Shells and Minerals, valued at.....	19,000 00
5. Furniture and fixtures of all buildings, valued at..	16,000 00
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Total amount of the above values used for purposes of instruction.....	<u>\$228,000 00</u>

## 16. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

1. The College owns for the purpose of completing its buildings three houses and four city lots contiguous to and within the grounds already mentioned, valued at .....	\$60,000 00
2. A parochial church on West Sixteenth street, and a free school on West Nineteenth street, valued at..	80,000 00
3. A country residence at Lloyd's Neck, L. I., for the use of the professors during the summer vacations, valued at .....	12,000 00
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Total amount of the above values.....	<u>\$152,000 00</u>

## 17. DEBTS.

The total amount of debts contracted by the Trustees and remaining unpaid at the close of the last collegiate year was.....	<u>\$125,000 00</u>
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## 18. REVENUE.

The amount of revenue for the said year was as follows:

1. Amount received for tuition.....	\$22,217 48
2. Rents collected .....	11,249 87
3. Received on account for scholarships.....	2,040 00
<hr/>	
Total revenue .....	<u>\$35,507 35</u>

## 19. EXPENDITURES.

The liabilities incurred during said year were as follows :

1. Maintenance of unsalaried Professors.....	\$8,500 00
2. Aggregate expenses of salaried Professors.....	4,650 00
3. Insurance and repairs of College property.....	4,970 00
4. Taxes, interest on debt, fuel and all other incidental expenses.....	12,387 35

Total expenditure.....	<u>\$30,507 35</u>
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Showing an excess of income over expenditures of....	<u>\$5,000 00</u>
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## 20. TABULAR STATEMENT.

Number of Collegiate departments.....	4
Professors .....	21
Tutors .....	4
students.....	447
graduates at last Commencement.....	<u>23</u>

Value of College buildings and grounds.....	\$194,000 00
Value of libraries and apparatus.....	34,000 00
Value of other College property.....	152,000 00
Revenue of the last Collegiate year.....	35,507 35
Amount of debts of the College.....	<u>125,000 00</u>

## 21. PRICE OF TUITION.

Tuition per quarter.....	\$15 00
Drawing per quarter.....	5 00
Entrance fee.....	5 00
Library fee per year.....	<u>2 00</u>

## 22. REMARKS.

None.

## 23. CLOSE OF REPORT.

The report here given was laid before the Board of Trustees, at a meeting held on the 7th day of November, 1872, adopted and approved by them. The seal of the College, with the signature of the President, Secretary and Treasurer were ordered to be affixed to the same, and the whole forwarded.

H. HUDON, *President.*

[L. S.]

H. DURANQUET, *Secretary.*

D. A. MENICK, *Treasurer.*

## XVII. VASSAR COLLEGE, POUGHKEEPSIE, DUTCHESS COUNTY.

*To the Regents of the University of the State of New York :*

The Trustees of Vassar College, in compliance with the requisition of the Regents of the University, submit the following report for the last collegiate year, ending on the 26th day of June, 1872, and for the last financial year, ending on the 31st day of August, 1872 :

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

1. Mental and Moral Philosophy.
2. Mathematics, Natural Philosophy and Chemistry.
3. Astronomy.
4. Physiology and Hygiene.
5. Rhetoric and the English Language and Literature.
6. Natural History.
7. Ancient and Modern Languages.
8. Vocal and Instrumental Music.
9. Painting and Drawing.

## 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

*Trustees.*

Hon. Ira Harris, LL. D., Albany.  
Hon. William Kelly, Rhinebeck.  
Martin B. Anderson, LL. D., Rochester.  
Hon. John Thompson, Poughkeepsie.  
Rev. Edward Lathrop, D. D., Stamford, Ct.  
Hon. Charles W. Swift, Poughkeepsie.  
Rev. Elias L. Magoon, D. D., Philadelphia, Pa.  
Stephen M. Buckingham, Esq., Poughkeepsie.  
Hon. Nathan Bishop, LL. D., New York.  
Matthew Vassar, Jr., Esq., Poughkeepsie.  
Benson J. Lossing, Esq., Dover.  
Rev. Ezekiel G. Robinson, D. D., Rochester.  
Samuel F. B. Morse, LL. D., Poughkeepsie.  
Samuel S. Constant, Esq., New York.  
John Guy Vassar, Esq., Poughkeepsie.  
Rev. William Hague, D. D., Orange, N. J.

Rev. Rufus Babcock, D. D., Poughkeepsie.

Cornelius Dubois, Esq., Poughkeepsie.

John H. Raymond, LL. D., Poughkeepsie.

Morgan L. Smith, Esq., Newark, N. J.

Cyrus Swan, Esq., Poughkeepsie.

Hon. George W. Sterling, Poughkeepsie.

Smith Sheldon, Esq., New York.

Joseph C. Doughty, Esq., Poughkeepsie.

Augustus L. Allen, Esq., Poughkeepsie.

Edward L. Beadle, M. D., Poughkeepsie.

Hon. Thomas Cornell, Rondout.

Hon. George Innis, Poughkeepsie.

Hon. George H. Andrews, New York.

There was but one meeting held by the Trustees during the year, viz., the annual meeting June 25, 1872, at which the following persons were present: Messrs. Harris, Anderson, Lathrop, Swift, Magoon, Buckingham, Bishop, M. Vassar, Jr., Lossing, Constant, Babcock, Dubois, Raymond, Smith, Swan, Sterling, Sheldon, Doughty, Allen, Beadle, Cornell, Innis, Andrews.

### *Faculty.*

John H. Raymond, LL. D., President, and Professor of Mental and Moral Philosophy.

Harriet W. Terry, Lady Principal.

Charles S. Farrar, A. M., Professor of Mathematics, Natural Philosophy, and Chemistry.

Maria Mitchell, Ph. D., Professor of Astronomy and Director of the Observatory.

Alida C. Avery, M. D., Professor of Physiology and Hygiene, and Resident Physician.

Truman J. Backus, A. M., Professor of Rhetoric and of the English Language and Literature.

James Orton, A. M., Professor of Natural History.

Charles J. Hinkel, Ph. D., Professor of Ancient and Modern Languages.

### *Other Officers of Instruction.*

Henry van Ingen, Professor of Painting and Drawing.

Frederick Louis Ritter, Professor of Vocal and Instrumental Music.

Priscilla H. Braislin, Teacher of Analytical Chemistry and Mathematics.

Eliza M. Wiley, Teacher of Music.  
Lepha N. Clarke, Teacher of the English Language.  
Caccilie Kapp, Instructor in the German Language and Literature.

Fanny A. Wood, Teacher of English Composition.  
Frances Ellen Lord, Teacher of the Latin Language.  
Sarah E. Newman, Teacher of Music.  
Eunice D. Sewall, Librarian.

Anna M. Platt, Teacher of Music.  
Mary E. Preston, Teacher of Music.  
Anna Ballard, Teacher of Vocal Music.  
Emily Lhoyd, Teacher of Music.

Agnes M. Lord, Teacher of Music.  
Mary Dame, President's Secretary and Assistant Librarian.  
Adelaide L. Smiley, Teacher of Latin.

Kate Mann, Teacher of the French Language.  
Caroline B. Le Row, Teacher of Elocution.  
Elizabeth W. Robb, Teacher of Mathematics.

Abbie F. Goodsell, Teacher of English Composition.  
Charlotte M. Duty, Teacher of Physical Geography and Latin.  
Cornelia Cailiff, Instructor in Physical Training.

Ottilie G. Klauczek, Teacher of Music.  
Emma M. Colby, Teacher of Mathematics.  
Lily E. Smith, Teacher of Vocal and Instrumental Music.

Susan E. Daggett, Assistant to the Lady Principal.  
Alice T. Hubbard, Teacher of Mathematics.  
Charlotte C. Haskell, Teacher of Botany.

Eugénie Nicolas, Teacher of the French Language.  
Lorette M. Thurber, Teacher of Latin.

Frank Augustus von Mentzdorff, Master of Horsemanship.

The other officers or servants of said College charged with duties therein other than those of instruction, during said year, were a treasurer, an assistant treasurer and registrar, a local agent, a steward, a housekeeper, a janitor, an engineer, a farmer and a gardener, who were assisted by thirty-four men servants and ninety-five women servants.

### 3. NUMBER OF STUDENTS.

The whole number of students, undergraduates in said College during said year, was 263, of whom thirteen left before the close of the year. There was one resident graduate.

Besides the above there were 151 students pursuing studies *preparatory* to the regular course. Of these, fifteen left before the close of the year.

Of the undergraduates the maximum age was .....	31
Of the undergraduates the minimum age was .....	15
Of the undergraduates the average age was.....	18½
Of the graduates the maximum age was.....	24
Of the graduates the minimum age was.....	18
Of the graduates the average age was.....	20½

4. CLASSIFICATION OF STUDENTS.

The undergraduates were classified as follows :

<i>Students pursuing the Regular Course.</i>	
Seniors .....	28
Juniors.....	47
Sophomores .....	53
Freshmen.....	77
	<hr/> 205

<i>Students pursuing Special Courses.</i>	
The average grade of their studies being :	
Senior.....	1
Junior .....	13
Sophomore .....	25
Freshman.....	19
	<hr/> 58

Whole number of College students.....	263
Students pursuing preparatory studies.....	151
	<hr/>
Whole number of students (resident graduate).....	415

From the State of New York.....	139
other Middle States.....	56
New England.....	89
Western States.....	106
Southern States.....	17
District of Columbia.....	2

From Territories.....	1
Canada.....	3
New Brunswick.....	2
Total.....	<u>415</u>

5. ACADEMIC DEGREES.

The following are the names of those on whom the degree of A. B. was conferred, on Commencement day, June 26, 1872: Anna Blackmar, Maria Porter Brace, Sarah Affia Catlin, Ida Corson, Lucy Elliott Crockett, Alice Dinsmoor, Williemena Hannah Elliot, Abby Farwell, Charlotte Elizabeth Finch, Annie Barker Folger, Alla Wright Foster, Agnes Wilford Hall, Harriet Robinson Harrington, Ella Strait Hollister, Elizabeth Pomeroy Kirby, Mary Alice Loomis, Elizabeth Merrell, Sarah Olive Peck, Mary Jeannette Rawson, Anna Eliza Richardson, Sarah Elizabeth Rollinson, Alice Deming Seelye, Mary Frances Slocum, Ada Stanton, Sallie McMeens Stem, Mattie Lucinda Thornton, Mary Elizabeth Van Etten, Mattie Mercelia Waldron, Alice Mary Wetmore.

On the same day the degree of A. M. was conferred on the following: Isabella Carter, Sarah Mariva Glazier, Mary Watson Whitney.

6. COLLEGE SESSION.

The collegiate year was one continuous session of forty weeks; it began September 22, 1871, and ended June 26, 1872.

A recess of a fortnight was had at the Christmas holidays, and one of a week in April. A change of studies was made in most of the departments of instruction at the middle of the collegiate year, February 5.

*Calendar for 1872-73.*

Commencement .....	June	26, 1872
Entrance examinations .....	Sept.	18, 19, 1872
College exercises begin .....	Sept.	20, 1872
Anniversary of Philalethean Society.....	Dec.	6, 1872
Winter holidays begin.....	Dec.	20, 1872
Winter holidays end.....	Jan.	4, 1873
Washington's birthday.....	Feb.	22, 1873
Day of prayer for Colleges.....	Feb.	27, 1873
Spring recess begins.....	April	11, 1873
Spring recess ends.....	April	22, 1873

Founder's day.....	April	29, 1873
Annual meeting of the Board of Trustees.....	June	24, 1873
Commencement .....	June	25, 1873
Entrance examinations (for 1873-74),.....	June	21, 23, 1873
and .....	Sept.	17, 18, 1873

#### 7. SUBJECTS OF STUDY.

The studies pursued by the several classes taught in the College, with the text-books used and the amount studied, were as follows:

##### *Preparatory Classes (151 Students).*

Classes were taught in the following branches: Latin: Andrews' Lessons, entire; Cæsar, four books; Cicero, four orations; Virgil's Æneid, two books.

French: Otto's Grammar, entire; Williams' Dialogues, fifty pages; Pylodet's Littérature Contemporaine, forty pages.

Algebra.—Robinson's University, to equations of the second degree.

Rhetoric.—Hart's, 285 pages.

Ancient History.—Weber's Outlines, "Greece and Rome," 113 pages.

Physical Geography.—Mitchell's, 100 pages.

Botany.—Gray's, 200 pages.



JUNIOR CLASS—(Continued).

SUBJECTS AND AUTHORS.	Amount.	Lectures.	Students.	Weeks.	Times a week.	Instructors.
Political Economy .....	.....	20	57	20	1	Professor.
Geology and Physical Geography (Dana).....	500 pp.....	25	39	17	5	Professor.

SENIOR CLASS—(28 REGULARS, 1 SPECIAL).

Mental Philosophy (Murray's Outline of Hamilton) .....	190 pp., with references to parallel passages in Reid, Bowen and Stewart .....	15	23	18	5	Professor.
Moral Philosophy (Hamilton and Wayland) ..	Outlines of Hamilton, 66 pp.; Wayland, entire, 386 pp. ....	9	9	18	5	Professor.
German Grammar (Otto).....	Entire .....	.....	.....	.....	.....	.....
Goethe: Iphigenie .....	Entire .....	.....	.....	.....	.....	.....
..... Faust.....	Entire .....	.....	.....	.....	.....	.....
Lessing: Minna v. Barnhelm .....	Entire .....	.....	.....	.....	.....	.....
..... Nathan .....	Entire .....	.....	.....	.....	.....	.....
History of German Literature (Roquette)....	250 pp.....	10	27	20	5	Instructor.
Astronomy (Chauvenet) .....	211 pp.....	...	1	36	5	Professor.
Chemistry .....	.....	54	32	36	5	Prof. and 1 Teacher.
Logic (Jevons).....	Entire: 331 pp....	8	16	20	5	Professor.
Anatomy and Physiology (Draper) .....	292 pp.....	.....	17	19	5	Professor.

ART STUDIES.

Instruction in Painting and Drawing and in Music was given partly to classes in the regular Collegiate course, and partly to individuals in extra-collegiate and optional lessons.

1. *Painting and Drawing.*

1. *Collegiate.* A course of seventeen weekly lessons in Elementary Drawing (including Perspective) was given by the Professor to 102 pupils from the Freshman and Preparatory classes.

2. *Extra-Collegiate.* There were fourteen pupils in Painting and seven in Drawing, two semesters, averaging three lessons a week.

The whole Department received one lecture on Friday of each week on the Theory of Drawing, including geometrical and perspective drawing and the laws of proportion. From the 1st of May, 1872, until the close of the term, the afternoons of Tuesday and Thursday were spent out of doors in drawing and painting from nature.

II. *Vocal and Instrumental Music.*

1. *Collegiate.* A class, embracing all in the College who desired to join it, was instructed by the Professor in the Elements of Vocal Music and drilled in choral singing ; one lesson a week, two semesters. It contained one hundred and twenty-five members.
2. *Extra-Collegiate.* There were 109 pupils on the piano-forte, seven on the organ, thirty-four in solo singing, and twelve in the Theory and History of Music, two lessons a week, two semesters. Average number taking lessons at any one time, 149.

8. EXERCISES.

I. *English Language.*

The several classes were exercised during said year as follows :

Classes.	SUBJECTS.	Students.	Teachers.	Weeks.	Frequency.
Senior.....	Essay—Writing.....	34	Prof.	40	Once in six weeks.
	Elocution.....	27	1	32	Thrice a week.
Junior.....	Composition.....	46	1	40	Once in five weeks.
	Elocution.....	23	1	16	Twice a week.
Sophomore .....	Composition.....	54	1	20	Once in four weeks.
	Elocution.....	36	1	32	Twice a week.
	English. (Readings).....	43	Prof.	12	Once a week.
Freshman .....	Composition.....	71	1	40	Once in four weeks.
	Elocution.....	45	1	16	Twice a week.
	Grammatical Analysis, etc.....	58	1	18	Twice a week.
Preparatory.....	Composition.....	86	1	18	Once in three weeks.
	Elocution.....	21	1	16	Twice a week.
	English.....	127	2	18	Twice a week.

II. *Physical Training.*

All the students of said College received regular drill in the Light Gymnastics three times a week during the year.

Other forms of physical exercise were voluntary, each student, however, being required (unless excused by the Health Officer) to spend one hour daily in some form of exercise. Fifty-six were pupils of the Riding-School, thirty-eight were members of the Floral Society, and 117 of boating clubs.

9. EXHIBITIONS.

The public exhibitions during said year were the following, viz. : the annual literary entertainment of the Philalethean Society, two soirées of chamber music, and three concerts by the Cecilia Society, Founder's Day, the annual address before the Philalethean Society, and Class and Commencement Days.

## 10. EXAMINATIONS.

There were examinations, oral and written, of all the classes at the end of each semester, on the work of the semester. These were open to the public.

## 11. MODE OF INSTRUCTION.

In the Senior, Junior and Sophomore classes, the text-book instruction was supplemented by lectures, as above reported. In Natural Philosophy and Chemistry, the text-books were used only for reference.

In the Freshman and Preparatory classes, the instruction was given in general by text-books only; in History and Botany, by text-books and lectures; and in Physiology, by lectures alone.

When lectures were employed, the class was examined subsequently on the subject of each.

## 12. DISCIPLINE.

No act of formal discipline was required.

## 13. GRATUITOUS AID.

Four students, relatives of the founder of said College, were furnished gratuitously with board and tuition during said year. Also, board and tuition were furnished in part gratuitously to sixteen pupils, ten receiving aid to the amount of \$100; six, to the amount of \$200. In these cases, the expense was defrayed by the income of the Vassar Auxiliary Fund, a bequest left by the founder of the College for this purpose.

## 14. LAWS OF THE COLLEGE.

No change was made in the laws.

## 15, 16. DESCRIPTION AND VALUE OF COLLEGE PROPERTY.

The expense of the grounds, constructions and collections, in the following exhibit, has been defrayed out of the original donation of Mr. Vassar (\$408,000), the earnings of the College during the seven years since it opened, and the only exceptions to this statement are in the two items of

1st. The Art Gallery and Library, which were a separate gift by Mr. Vassar, at an actual cost of \$20,000.

2d. The Cabinet of Ornithology, presented to the College by J. P. Giraud, Jr., Esq., of Poughkeepsie. This valuable collection of

North American birds, one of the most complete in the country, and estimated then to be worth more than \$5,000, has since been enlarged by several important additions from the same generous donor and by a few purchases.

*College Buildings.*

Cost value of edifice, together with buildings for gas, steam, water works and ice-house.....	\$341,484 93
Calisthenium, including gymnasium, music rooms, riding-school, tenements and stables.....	46,098 70
Grounds (210 acres) and farm-house .....	44,810 80
Observatory .....	6,040 85
Gate lodge.....	6,684 00
	<hr/>
Real estate .....	\$445,119 28

*Other College Property.*

College Library (7,030 volumes), well pre- served.....	\$11,721 05
Art gallery, art library and artists' mate- rials .....	27,097 86
Furniture, fixtures and outfits .....	66,022 79
Musical instruments .....	11,000 00
Apparatus:—Chemicals .....	\$1,001 00
Philosophical..	4,080 62
Anatomical ...	1,168 35
Mathematical..	300 00
Astronomical .:	8,108 44
	<hr/>
	14,658 41
Cabinets:—Ornithology ....	\$5,865 00
Zoölogy .....	1,367 41
Geology and Min- eralogy .....	8,500 00
	<hr/>
	15,732 41
Stock:—20 shares Corn Ex. Fire Ins....	225 00
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Personal property .....	146,457 52
	<hr/>
Aggregate amount of property .....	\$591,576 80
	<hr/> <hr/>

## 17. REVENUE.

The following has been the income of the College during the academic year :

Amount charged for tuition, collected or collectible...	\$63,589 91
Amount charged for board, collected or collectible ...	103,633 34
Stationery and text-books.....	\$750 00
Miscellaneous, viz.:—Interest on bank deposits, boating, medical attendance, etc. ....	2,925 94
	<u>3,675 94</u>
Aggregate amount of income .....	<u><u>\$170,899 19</u></u>

## 18. EXPENDITURES.

Salaries of officers of institution.....	\$37,021 37
Salaries of other officers, employes and servants .....	17,042 80
	<u>\$54,064 17</u>
Table expenses .....	\$49,536 22
Fuel, light and steam-heating, .....	17,579 00
Repairs and improvements, and all other incidental expenses .....	21,514 68
	<u>88,629 90</u>
	<u><u>\$142,694 07</u></u>
Excess of receipts over current expenses.....	<u><u>\$28,205 12</u></u>

MEM.—It is proper to add, that out of moneys specifically provided therefor by the will of Matthew Vassar, the sum of \$814 has been expended for lectures by distinguished persons; also, \$2,400 for aid to students of superior promise, who were unable to defray the whole expense of board and tuition; and \$1,553 for additions to the Cabinets of Ornithology and Zoölogy, and to the Library; and that for future use for like purpose, a Lecture fund of \$50,000, an Auxiliary fund of \$50,000, a Library, Art. and Cabinet fund of \$50,000, and a Repair fund of \$100,000 and upward, have also been provided by such will, and have been paid over to the College.

## 19. PRICES.

For tuition in Collegiate branches, whether in the regular or a special course, \$2 per week, or \$100 per year; for board, including furnished

rooms, with light, heat and ordinary washing, \$7 per week, or \$300 per year, making for every student a charge of \$400 per year of forty weeks.

To those pursuing Extra-Collegiate branches, an additional charge was made, as follows:

For instruction on the Piano, Organ, or in Singing, \$50 per annum.

For instruction in Painting or Drawing..... 60 “

The cost of necessary text-books, stationery, music, drawing materials, riding habits, etc., varied widely with the circumstances of the students. For those not pursuing Extra-Collegiate branches, \$500 for the College year would be a liberal average for all necessary expenses, including board and tuition.

The foregoing report is respectfully submitted to the Regents by the undersigned, who were appointed a committee for that purpose by the executive committee of the Board of Trustees at a regular meeting of the same, November 3, 1871.

J. H. RAYMOND, *President.*

M. VASSAR, JR., *Treasurer.*

S. M. BUCKINGHAM, *Secretary.*

## XVIII. MANHATTAN COLLEGE, NEW YORK CITY.

*To the Regents of the University of the State of New York:*

The Trustees of Manhattan College, in compliance with a requisition of the Regents of the University, submit the following report for the last collegiate year, ending on the 28th day of June, 1872, containing a just and true statement of facts showing the progress and condition of said College during and at the close of said year, in respect to the several subject-matters following, viz.:

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in the said College during said year were the following:

Professorship of Mathematics; Professorship of Philosophy; Professorship of Latin and Greek; Professorship of Mathematics and Elocution; Professorship of Latin, Literature and Rhetoric; Professorship of English Literature and History; Professorship of Latin and Greek; Professorship of Mathematics and Natural Sciences; Professorship of Elocution and Composition; Professorship of French and German; making in all ten professorships.

## 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

*Trustees.*

John E. Develin, Chairman, New York city.

Edward I. Sears, Secretary, New York city.

Dennis Sadlier, New York city.

John P. Murphy, New York city.

Patrick S. Fanning, New York city.

James Walsh, Yonkers, N. Y.

Peter Muth, Utica, N. Y.

Bernard Feeney, Albany, N. Y.

Bernard Fackeldy, Westchester, N. Y.

Patrick O'Rourke, Troy, N. Y.

Joseph Brennan, New York city.

Edward Callaghan, New York city.

Francis M. Barat, New York city.

Thomas Madden, New York city.

Damase Gosselin, New York city.

Fitzpatrick Garret, Troy, N. Y.  
 William H. Byrnes, New York city.  
 Henry L. Hoguet, New York city.

### 3. FACULTY AND OTHER COLLEGE OFFICERS.

The Faculty of said College, including all persons charged with the duty of giving public instruction therein during said year, consisted of the following:

Brother Patrick, President.

Brother Paulian, Vice-President, Professor of Mathematics.

Rev. John Breen, Professor of Philosophy.

Cornelius M. O'Leary, A. M., Ph. D., M. D., Professor of Latin and Greek.

Brother Humphrey, Professor of Mathematics and Elocution.

Patrick Mulrenan, A. M., Professor of Latin, Literature and Rhetoric.

Brother Anthony, Professor of English Literature and History.

Thomas McOscar, Professor of Latin and Greek.

Brother Agnus Peter, Professor of Mathematics and Natural Sciences.

Brother John Chrysostom, Professor of Elocution and English Composition.

Brother Arator, Professor of French and German.

James P. Meline, A. M., Lecturer on English Literature.

Charles R. Roussel, Professor of Sculpture and Drawing.

Brother Lucidius, Principal of the Commercial Department.

Brother Thomas, Principal of the Preparatory Department.

Brother Jasper, Prefect of the Senior Students.

Brother Hugh Thomas, Prefect of the Preparatory Department.

Brother Beccelin, Assistant Prefect of the Preparatory Department.

John C. Goeb and Redmond Carroll, Professors of Music.

There were thirty-two other professors and teachers engaged in the Preparatory and Commercial departments during said year. Thirty-six of the total number of instructors have devoted themselves to the cause of education, and are unsalaried.

The number of other officers and servants performing duties in the College was thirty-two.



4. NUMBER OF STUDENTS.

The total number of students, undergraduates, was.....	78
Left during the year for various reasons.....	2
There remained at the close of the session.....	76
Graduated. June 28th, 1872.....	5
Number of students in the Preparatory and Commercial departments .....	630

The intended occupation of graduates: Theology two; Teaching two; Law one.

Average age of graduates twenty years; the youngest undergraduate was fourteen years, the oldest twenty-three; average age of undergraduates, eighteen years.

5. CLASSIFICATION OF STUDENTS.

Fourth class, Freshman.....	35
Third class, Sophomore.....	20
Second class, Junior.....	15
First class, Senior .....	6
	76
Commercial Department, five classes.....	119
Preparatory Department, sixteen classes.....	511
Resident graduate.....	1
Total number in Collegiate, Commercial and Preparatory Departments .....	707

6. ACADEMIC DEGREES.

A. B. James B. Fisher, Thomas P. Malany, George J. McFadden, Maurice J. Dougherty, James L. Crosby.

A. M. James J. Delaney, Edward F. Fagan, R. Ogden Glover, Jr., John M. Grady, Michael J. McGowan, Henry C. McLean, Richard J. Morrison.

7. COLLEGIATE TERMS.

There are two terms of five months each; the first term commenced on the 4th of September, and the second on the 1st of February.

Vacation during the months of July and August, and ten days at Christmas.

The Annual Commencement took place June 28th, 1872. The calendar for the next year following, is the same as the foregoing, except the day of Commencement, which is not yet determined.

#### 8. SUBJECTS AND COURSES OF STUDY.

There are two courses for undergraduates, one Classical, the other Scientific; both extend to four years, and are pursued in the following order:

##### *Fourth Class—Freshman.*

*First Term.* Sallust's Catiline; Virgil's *Æneid*, two books; Xenophon's *Anabasis*, two books; Greek Testament, selections; Solid and Spherical Geometry, Greenleaf; Algebra to Section V, Robinson.

*Second Term.* Four Orations of Cicero; Virgil's *Æneid*, four books; Xenophon's *Anabasis*, one book, and three reviewed; Analytical and Practical Trigonometry, Greenleaf; Algebra to Logarithms.

*Both Terms.* Arnold's Latin Prose Composition, Part I; Latin Prosody, reviewed; Fisk's Greek Grammar; Fasquelle's French Course; English Composition and Rhetoric, Blair; Classical Geography, Mitchell; Ancient History to Part V, Fredet; Christian Doctrine, Gaume.

##### *Third Class—Sophomore.*

*First Term.* Two Orations of Cicero; Horace, Satires; Homer's *Iliad*, three books; Herodotus; Spherical Trigonometry; Surveying, Robinson; Algebra, completed.

*Second Term.* Horace, Odes and Epistles; Livy, two books; Homer's *Iliad*; Herodotus; Navigation; Analytical Geometry, Johnson; Botany, Gray.

*Both Terms.* Arnold's Latin Composition, reviewed; Arnold's Greek Composition, Part I; Natural Philosophy, Ganot; Chemistry; Fasquelle's French Course, reviewed; Telemachus, five books; English Literature and Rhetoric; Ancient History, completed; Elocution; Christian Doctrine.

##### *Second Class—Junior.*

*First Term.* Horace, *Ars Poetica*; Cicero *de Oratore*, two books; Arnold's Latin Composition, Part II; Demosthenes, three *Olynthiacs*; Homer; Arnold's Greek Composition, reviewed; Analytical

Geometry; Differential Calculus, Church and Haddon; Chemistry; Botany; Philosophy, Logic, Bouvier.

*Second Term.* Juvenal, seven; Tacitus, Germania and Agricola; Arnold's Latin Composition, Part III; Demosthenes, two Philippics; Sophocles, one Drama; Calculus; Physiology; Philosophy; Metaphysics.

*Both Terms.* Bossuet's Orations; Natural Philosophy, completed; English Literature and Rhetoric; Essays; History, Modern; Elocution.

#### *First Class—Senior.*

*Both Terms.* Quintilian's Institutes, two books; Persius, five; Latin Conversation and Composition; Exercises from various Latin authors; Plato, Georgias; Enripides, one; French Literature and Composition; English Literature and Rhetoric; Essays; Debates; Astronomy; Philosophy.

#### SCIENTIFIC COURSE.

##### *Fourth Class—Freshman.*

*First Term.* Geometry, Solid and Spherical, Greenleaf; Algebra to section V, Robinson's University; Descriptive Geometry, Davies; English Composition and Rhetoric, Blair; Geography and History, Mitchell and Fredet; Elocution; French, Fasquelle's Course; Colloquial Reader; Adler's German Ollendorff; Adler's German Reader; Christian Doctrine.

*Second Term.* Geometry, Analytical, Young; Algebra to Logarithms; Plane Trigonometry and Mensuration, Greenleaf; Natural Philosophy, introductory, Olmsted; Surveying, Gillespie; Geometrical Drawing; Descriptive Geometry; English Composition and Rhetoric; Geography and History, Ancient; Elocution; French, Fasquelle's Course, Colloquial Reader; German; Christian Doctrine.

##### *Third Class—Sophomore.*

*First Term.* Analytical Trigonometry, Plane and Spherical, Greenleaf and Chambers; Analytical Geometry, two dimensions, Robinson and Salmon; Algebra; Geometrical Drawing, Surveying, chain; Descriptive Geometry; Natural Philosophy; Mechanics; Chemistry; English Literature and Rhetoric; History, Ancient; Elocution; French, Fasquelle's Course; Telemachus; German; Christian Doctrine.

*Second Term.* Algebra, reviewed; Analytical Geometry; Surveying; Geometrical Drawing; Descriptive Geometry; Navigation, Robinson; Natural Philosophy; Hydrostatics; Pneumatics; Acoustics; Chemistry; English Literature and Rhetoric; Essays; History, Ancient; Elocution; French, Fasquelle's Course, reviewed; Telemachus; German; Christian Doctrine.

*Second Class—Junior.*

*First Term.* Calculus, Church and Haddon; Surveying; Navigation; Descriptive Geometry; Geometrical Drawing; Natural Philosophy; Chemistry; English Literature and Rhetoric; Essays; History, Modern, Frédet; French Composition; Bossuet's Orations; German; Philosophy, Psychology and Logic, Barbé.

*Second Term.* Calculus; Natural Philosophy, reviewed; Mechanics; Descriptive Geometry; Chemistry, reviewed; Geology, Hitchcock; Surveying; English Literature and Rhetoric; Essays; History, Modern; French Composition; Bossuet's Orations; German; Philosophy, Psychology and Logic, Barbé.

*First Class—Senior.*

*Both Terms.* Astronomy; Mechanics, Robinson and Woolhouse; Descriptive Geometry; Geology; Botany; Mineralogy; Physiology; English Literature and Rhetoric; Essays; History, Modern; Physics and Ethics, Barbé.

9. EXERCISES.

All the College classes were exercised in composition, elocution and extemporaneous speaking, once a fortnight. The compositions were read before the class, and commented upon by the students and professors. Much attention was bestowed upon debates and extemporaneous discussions, as they are deemed conducive to mental development, and well calculated to inspire the pupils with confidence in their own resources. During these discussions, the general elocution and gesture, as well as pronunciation, were carefully criticised, and such suggestions made as tended to enable the student to appreciate the importance of a natural and animated style, both in reading and writing. One hour each day was devoted to philosophy, the students being required to express themselves in the Latin language, a system which afforded the Professor an opportunity of imparting to them an elegant and correct style of Latinity.

A course of twelve lectures was given before the College classes by Professor Meline. The De La Salle Literary Society continued to publish, in manuscript, their monthly journal.

#### 10. EXHIBITIONS.

Twelve public entertainments were given by the Literary Societies of the College. The exercises of these entertainments consisted of essays, debates, declamations and music. Two concerts were given by the band, choir and orchestra.

#### 11. EXAMINATIONS.

No general entrance examination was held; but students, on being admitted, were examined and classified according to their attainments.

There were two examinations, one in January, the other at the end of the term, occupying one week. All who were likely to take an active part in testing the acquirements and abilities of the students were invited to attend.

Candidates for the degree of Bachelor of Arts were required to translate, with facility, the various Greek and Latin authors mentioned in the Course, and to speak the latter language fluently and well.

They were also subjected to searching examinations in Mathematics, Literature and Philosophy, and were required to write elaborate essays on given subjects.

#### 12. MODES OF INSTRUCTION.

Instruction is given by daily recitations from text-books, accompanied with explanations, analysis and criticisms by the Professor.

The general plan of instruction combines the analytical and synthetical. Students of the higher classes are required to use their text-books simply as such; the text merely furnished the basis of the argument or proposition. Even this, the student had to clothe in his own language; for the remainder he had to depend on his own reading and observation, together with such suggestions as the Professor thought he needed to enable him, not only to form an accurate conception of the subject under treatment, but also to give his impressions of it to the class orally or in writing.

13. DISCIPLINE.

The discipline of the College is committed to the President, who relies mainly on parental advice and moral influence to secure propriety of conduct, diligent application and gentlemanly deportment.

14. GRATUITOUS AID.

Gratuitous instruction was given to twenty-one students; board and instruction at reduced rates to fifty-one.

15. STATUTES OR BY-LAWS.

The Trustees have established no statutes or by-laws, but have relied on the President and his associates for the progress of the students and the maintenance of order.

16. DESCRIPTION AND VALUE OF COLLEGE PROPERTY.

The College grounds are located in the city of New York, extending from One Hundred and Thirty-first to One Hundred and Thirty-third streets, between the Grand Boulevard and Broadway; also three lots on Broadway, opposite the College.

The edifice consists of one large brick building, valued at,	\$100,000 00
Grounds are valued at .....	100,000 00
Library (number of volumes 6,600).....	12,300 00
Museum.....	5,000 00
Furniture.....	10,200 00
Gymnasium.....	2,500 00
Total .....	<u>\$230,000 00</u>

17. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

De La Salle Institute, on Second street, between First and Second avenues, comprises three brick buildings, used for a preparatory school, all of which are valued at .....	\$50,000 00
Philosophical apparatus and library.....	2,000 00
Furniture.....	6,000 00
Manhattan Academy, on Thirty-second street, between Seventh and Eighth avenues, consists of a large four-story brick building, used for a preparatory school; the ground and building are valued at.....	48,000 00
Library and furniture.....	4,000 00
Total value of College property.....	<u>\$340,000 00</u>

## 18. DEBTS.

None.

## 19. REVENUE.

The term bills are the only source; no productive endowments.

On hand, last report.....	\$1,447 60
Amount received for board, washing, tuition, stationery, etc., etc.....	58,367 25
	<hr/>
	\$59,814 85
	<hr/>

## 20. EXPENDITURE.

Salaries of Professors.....	\$8,700 00
Maintenance of College.....	50,449 06
	<hr/>
Total.....	\$59,149 06
	<hr/>

## 21. PRICE OF TUITION.

Tuition, board and washing, per session .....	\$300 00
German, Drawing, etc., extra.....	40 00
Music, piano, violin .....	60 00
Tuition in preparatory schools.....	40 00
	<hr/>

## 22. REMARKS.

Daniel J. Pratt, A. M., Assistant Secretary of the University, attended the Commencement.

A facade to the College is in the course of erection.

## 23. CLOSE OF REPORT.

At a regular meeting of the Board of Trustees, held at the College on the 9th day of December, 1864, a standing committee was appointed to draw up annual reports and forward the same to the Regents of the University.

The above has been prepared in accordance with that provision.

BRO. PATRICK, *Chairman of Committee.*

EDWD. J. SEARS, LL. D., *Secretary.*

BRO. SIMILIAN, *Treasurer.*

BRO. PAULIAN, *Director.*

[L. S.]

# XIX. CORNELL UNIVERSITY, ITHACA, TOMPKINS COUNTY.

*To the Regents of the University of the State of New York:*

The Trustees of the Cornell University submit the following as the annual report, required by law, for the academic year ending July 1, 1872, with the exception that the list of officers in the Faculty, and of students represents those bodies as they are at present, January 1, 1873, rather than as they were during the last year.

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

No Professorships are instituted except as they are filled by election of persons to fill them. None are *specially* endowed. The number at present instituted and filled will appear sufficiently from section three, below.

## 2. TRUSTEES

The number of Trustees, when the board is complete, is twenty-four. Of these, one is the founder, who, in accordance with the provisions of the charter, is a Trustee for life. Another is the eldest son of the founder, who, by the same authority, is a non-elected Trustee. Seven others are members of the board by virtue of the offices which they hold; these are *ex officio* Trustees. The remaining fifteen are elected for a term of five years, three retiring each year. By a special clause in the act of organization, the graduates of the University, whenever they shall number one hundred, shall be entitled to fill the place, each year, of one of the retiring members.

Hon. Ezra Cornell, Ithaca.

Hon. Alonzo B. Cornell, New York city.

The President of the University, *ex officio*.

His Excellency the Governor of New York, *ex officio*.

His Honor the Lieutenant-Governor, *ex officio*.

The Speaker of the Assembly, *ex officio*.

The Superintendent of Public Instruction, *ex officio*.

The President of the State Agricultural Society, *ex officio*.

The Librarian of the Cornell Library, *ex officio*.

Hon. Hiram Sibley, Rochester; Hon. Edwin B. Morgan, Aurora; John McGraw, Esq., Ithaca. Term of office expires in 1874.



Gen. J. Meredith Read, Albany; Hon. Erastus Brooks, New York; Hon. Charles J. Folger, LL. D., Geneva. Term of office expires in 1875.

Hon. Abram B. Weaver, Albany; Hon. Amasa J. Parker, Albany; Hon. Josiah B. Williams, Ithaca. Term of office expires in 1876.

Hon. Stewart L. Woodford, Brooklyn; Hon. Horace Greeley, New York; Hon. Henry W. Sage, Brooklyn. Term of office expires in 1877.

Hon. George W. Schuyler, Ithaca; Hon. John H. Selkreg, Ithaca; Hon. George H. Andrews, New York. Term of office expires in 1878.

Hon. Ezra Cornell, Chairman.

Francis M. Finch, Esq., Ithaca, Secretary.

Hon. George W. Schuyler, Treasurer.

J. W. Williams, Esq., Assistant Treasurer.

### 3. FACULTY.

Hon. Andrew D. White, LL. D., President, Professor of History.

William Channing Russel, M. A., Vice-President, Associate Professor of History and Professor of the South European Languages.

#### *Resident Professors.*

Evan W. Evans, M. A., Professor of Mathematics.

George C. Caldwell, B. S., Ph. D., Professor of Agricultural Chemistry.

Burt G. Wilder, B. S., M. D., Professor of Comparative Anatomy and Zoölogy.

Willard Fiske, M. A., Ph. D., Librarian, Professor of North European Languages.

William D. Wilson, D. D., L. H. D., Registrar, Professor of Moral and Intellectual Philosophy.

James Law, F. R. V. C., Professor of Veterinary Medicine and Surgery.

William Charles Cleveland, C. E., Professor of Civil Engineering.

Charles Fred. Hartt, M. A., Professor of General, Economic and Agricultural Geology.

Albert N. Prentiss, M. S., Professor of Botany, Horticulture and Arboriculture.

John L. Morris, M. A., C. E., Professor of Practical Mechanics and Director of the Machine Shops.

Charles A. Shaeffer, M. A., Ph. D., Professor of Analytical Chemistry and Mineralogy.

Charles H. Wing, B. S., Professor of Chemistry.

Henry McCandless, Professor of Agriculture.

Tracy Peck, M. A., Professor of the Latin Language and Literature.

Isaac Flagg, Ph. D., Professor of the Greek Language and Literature.

Charles Chauncy Shackford, M. A., Professor of Rhetoric and General Literature.

Charles Babcock, M. A., Professor of Architecture.

Hiram Corson, M. A., Professor of Anglo-Saxon, English Literature and Oratory.

William A. Anthony, Ph. B., Professor of Physics and Industrial Mechanics.

*Assistant Professors.*

William E. Arnold, Major U. S. V., Assistant Professor of Mathematics and Military Tactics.

T. Frederick Crane, M. A., Assistant Professor of the South European Languages.

Henry T. Eddy, M. A., C. E., Ph. D., Assistant Professor of Mathematics.

Waterman T. Hewett, M. A., Assistant Professor of the North European Languages.

Bela P. Mackoon, M. A., Assistant Professor of the North European Languages.

James Edward Oliver, M. A., Assistant Professor of Mathematics.

Ziba Hazard Potter, M. A., M. D., Assistant Professor of Mathematics.

Frederick L. O. Roehrig, M. A., Assistant Professor of the South European Languages.

Alfred Stebbins, M. A., Assistant Professor of the South European Languages.

Lucien A. Wait, B. A., Assistant Professor of Mathematics.

*Non-Resident Professors.*

Louis Agassiz, LL. D., Cambridge, Mass., Professor of Natural History (no Lectures this year).

Theodore W. Dwight, LL. D., New York city, Professor of Constitutional Law.

John Stanton Gould, Hudson, N. Y., Professor of Mechanics applied to Agriculture.

George Washington Greene, M. A., East Greenwich, R. I., Professor of American History (Lectures during Winter Term).

James Russell Lowell, M. A., Cambridge, Mass., Professor of English Literature.

Goldwin Smith, L. H. D., Toronto, Canada, Professor of English History.

Bayard Taylor, M. A., Kennet Square, Pa., Professor of German Literature.

#### *Lecturers.*

James Anthony Froude, M. A., Oxon, English History.

G. V. Riley, Economic Entomology.

#### *Instructors.*

Edward Wyllys Hyde, B. C. E., Civil Engineering.

William Russell Dudley, Botany.

William Harkins, B. S., Assistant Librarian.

B. Hermon Smith, Director of the University Press.

George Berry, J. H. Comstock, Masters of the Chimes.

#### 4. DEGREES CONFERRED AT COMMENCEMENT, 1872.

The following is a list of those who received degrees at the Annual Commencement at the close of the fourth academic year, together with the degrees conferred :

*Bachelors of Science.*—Edward Louis Brady, Etna; Harry Snively Buffum, Pittsburg, Pa.; John Manly Chase, Schenevus; Arthur Charles Clement, Joliet, Ill.; Austin William Clinton, Newark Valley; Millard Thorn Conklin, Newburgh; Delmar Matthews Darrin, Addison; Leroy Allison Foster, Portland, Me.; William Harkins, Gerry; Russel Headley, Newburgh; Isaac Newman Lounsbury Heroy, Bullville; William Edward Holcomb, Williamson; Jetson Harvey Hurd, Batavia; George Adrian Iselin, New York city; Louis Frederick Judson, Cleveland, O.; Maurice Kellogg, Cincinnati; Willie Burdette Leach, King's Settlement; John Warren Mack, Bath; James Taintor McCollum, New Lisbon; Ebenezer Erskine McElroy, Greenfield, O.; Frank De Elwin Nash, Hubbardsville; Edward Nicoll, Islip; William Henry Niles, Hornellsville; De Merville Page, Haskinville; Mahlon Gaylord Peters, White

Haven, Pa.; Gideon Welles Pitts, Honeoye; Henry George Pollock, New York; Washington Irving Scott, Bridgewater; Garrett Putnam Serviss, Glen; Clinton Smith, Syracuse; Loren Pease Smith, Trumansburgh; John Edwin Van De Carr, Nassau; Archibald Crosswell Weeks, Yaphank; Edgar Vinton Wilson, East Sullivan, N. H.; Taylor Henry Wolford, Slippery Rock, Pa.; William Jones Youngs, Huntington.

*Bachelors of Philosophy.*—Alva Morse Baldwin, Groton; George Fitch Reed, Brooklyn, Pa.; Herbert Edson Copeland, Monroe, Wis.; Cyrus Simeon Crofoot, Constableville; Irving Hoagland, B. S., Townsburry, N. J.; John Bogert Lawrence, Penn Yan; William N. Breckenridge Lawton, Benicia, Cal.; Adolphus Lafayette Rader, Bristol, Tenn.; John De Witt Warner, Rock Stream.

*Bachelors of Arts.*—Charles Hildreth Blair, Zanesville, O.; Fox Holden, North Lansing; Albert Osborn, Lockport; Timothy Sander-son, Walton.

*Bachelors of Civil Engineering.*—Milford Chauncey Bean, McGrawville; Daniel Wheeler Bowman, Scipioville; Ira Edgar Clark, Weston, Mass.; Dan Colburn, Walnut Grove, Ill.; Charles Lee Crandall, Ithaca; Gram Curtis, Brooklyn; Frederick William Frost, Springfield, Mass.; Henry Clay Henderson, Westchester; Rufus Bassett Howland, Danby; Edward Wyllys Hyde, Independent Hill, Va.; Charles Siverman Price, Lockhaven, Pa.; Alson Rogers, Warren, Pa.; Cyrus Black Sill, Wilkins, Pa.; Myron Greeley Stolp, Aurora, Ill.; Seymour Preston Thomas, Wilmington, Del.; Sylvester Niles Williams, Marengo, Ill.

*Bachelor of Veterinary Medicine.*—Daniel Elmer Salmon, Budd's Lake, N. J.

*Master of Science.*—David Starr Jordan, Gainesville.

*Doctor of Philosophy.*—Henry Turner Eddy, M. A., C. E., Ithaca.

*Licentiates.*—William Allen Butler, Civil Engineering; Joseph King Knight, Elisha Sheldon Lawrence, Ezra Cornell Robertson, Surveying and Draughting.

Total of Graduates .....	68
Total of Licentiates .....	4

## 5. NUMBER AND CLASSIFICATION OF STUDENTS.

The whole number of students in the University during the present year has been four hundred and ninety-four (494), and are classified as follows *by courses* :

Science.....	146
Literature .....	27
Arts .....	33
Agriculture.....	15
Architecture .....	18
Chemistry .....	9
Engineering .....	92
Mechanic Arts .....	23
Natural History .....	9
Optional .....	117
Resident Graduates .....	5

Or, classified by years :

In Post-Graduate courses .....	5
In fourth year, or Senior studies .....	98
In third year, or Junior studies .....	121
In second year, or Sophomore studies.....	119
In first year, or Freshman studies .....	151
Total .....	494

Of these, one hundred and eighty-two (182) were State students under the act of incorporation, and educated, of course, free of charge for tuition.

## 6. UNIVERSITY TERMS.

There were three terms: the first began September 13th and ended December 19th, fourteen weeks; the second began January 4th and ended March 26th, eleven weeks; the third began April 3d and ended June 27th, with the Annual Commencement, twelve weeks; making, in all, a total of thirty-seven weeks of term time.

## 7. SUBJECTS OR COURSES OF STUDY.

It is the design of the Founder, the Trustees and the Faculty, to make the institution, for the purposes of education, a University, as far as possible; or to make it, in the words of the founder, "an institution where any person can find instruction in any study." For

this purpose, several regular courses of study, both general and special, have been marked out, with the design of enlarging and improving them from time to time, as our means will allow or occasion may require. But besides this, students are allowed to enter the University and take optional courses, each student making one for himself, subject to two conditions only, viz.: 1. He must pursue the studies he proposes to take, in their natural and logical order (when there is any); that is, he must take Algebra before Geometry, Trigonometry before the Calculus, Elementary French and German before any of the advanced studies in those languages respectively. 2. He must take the studies at the seasons in which they occur in the regular courses; as, for example, Algebra in the fall term, Botany (elementary) in the summer term, etc.

The students are classified, in reference to their *studies*, into three classes: 1. Students in general courses. 2. Students in special courses. 3. Students in optional or elective studies.

There are three general courses, viz.: (1) The course in Arts (Classical); (2) The course in Literature; (3) The course in Science. To the graduates in the course of Arts we give the degree of B. A., and those in the course of Literature the degree of L. H. B., and to those in the course in Science the degree of B. S.

The special courses already established are seven in number, viz.: (1) The course in Agriculture; (2) The course in Architecture; (3) The course in Chemistry and Physics; (4) The course in Engineering; (5) The course in History and Political Science; (6) The course in the Mechanic Arts; (7) The course in Military Science; (8) The course in Natural History.

Elective or optional students are those who enter the University and take such studies as their tastes, or the profession or pursuit in life which they intend to follow, may require. They are not considered as candidates for any degree or diploma, although by pursuing a course which, in the estimation of the Faculty, is equivalent to either one of the general courses, they may take the same degree as though they had pursued that course regularly.

## 8. COURSES OF STUDY.

### I. *General Courses.*

#### THE COURSE IN SCIENCE.

The Curriculum in Science, leading to the degree of Bachelor of Science, extends over twelve terms or four years, and includes, as is

seen in the following schedule, five hours a week, during one year, devoted to some special branch of knowledge. Its peculiar features are the study of Mathematics; of the French and German languages; and of the historical, physical, moral and political sciences. It comprehends an attendance, during at least fifteen hours a week, upon lectures and class exercises involving the following subjects:\*

*First Year.*

*First Term.* Algebra completed (5); French (5); Physiology (3); English diction (2).

*Second Term.* Geometry (5); French (5); Zoölogy (3); English construction (2).

*Third Term.* Geometry finished (5); French (5); Ancient History (3); English Philology (2).

*Second Year.*

*First Term.* Trigonometry and Surveying (4); German (5); French advanced (3); Chemistry (2); Rhetoric and Elocution (1).

*Second Term.* German (5); French advanced (3); Analytical Geometry or Roman History (4); Chemistry (2); Rhetoric or Elocution (1).

*Third Term.* German (5); Calculus or History of the Roman Empire (4); Botany (3); French continued, Italian or Spanish (3); Rhetoric and Elocution (1).

*Third Year.*

*First Term.* Psychology (3); Mediæval History (5); German advanced (3); Physics (3); English Literature (1).

*Second Term.* Astronomy (5); Moral Philosophy and Political Economy in alternate years (3); German advanced (3); Physics (3); English Literature (1).

*Third Term.* Logic (3); Geology (4); Physics (3); German advanced, Italian, Spanish, Swedish (3); Essays (2).

*Fourth Year.*

*First Term.* History (5); History of Philosophy (2); Geology and Physical Geography (2); General Literature (1); *specialty* (5).

*Second Term.* History (5); Moral Philosophy and Political Economy in alternate years (3); General Literature (2); *specialty* (5).

\* The figures in parentheses denote the number of recitations per week in the study named before them.

*Third Term.* History (5); Lectures of non-resident Professors; Critical Analysis of Orations, with Extempore Speaking (3); *specialty* (5); preparation for Commencement.

Any student may take German instead of French in the first year, and French instead of German in the second year. It is to be understood, however, that both languages are to be taken to the amount indicated in the above schedule by all candidates for the degree of Bachelor of Science. The *specialty* prescribed for the fourth year must be in some one department of Science, such as Agriculture, Veterinary Surgery, Agricultural Chemistry, General Chemistry, Mathematics, Mechanics, Zoölogy, Botany, Geology, etc.

#### THE COURSE IN LITERATURE.

The Curriculum in Literature, leading to the degree of Bachelor of Literature, extends over twelve terms, or four years. It differs from the Course in Science in comprising something less of Scientific studies and Mathematics, and is characterized by a larger amount of attention to the Modern Languages and General Literature. It comprehends an attendance of at least fifteen hours a week upon lectures and class exercises, embracing the following subjects:

##### *First Year.*

*First Term.* Algebra (5); Latin (4); Physiology (3); English diction (2); Anglo-Saxon (1).

*Second Term.* Geometry finished (5); Latin (4); Zoölogy (3); Anglo-Saxon and early English (3).

*Third Term.* Trigonometry and Surveying (5); Latin (4); Ancient History (3); early English (2).

##### *Second Year.*

*First Term.* German or Latin (5); Physics (3); Chemistry (2); French (5); Rhetoric and Elocution (1).

*Second Term.* German or Latin (5); Physics (3); French advanced (3); Roman History (4); Rhetoric and Elocution (1).

*Third Term.* German or Latin (5); Physics (3); History of the Roman Empire (4); Rhetoric (3).

##### *Third Year.*

*First Term.* Psychology (3); Mediæval History (5); Latin or Modern Languages (5); Essays and Criticism of Authors (1); History of English Literature (1).



*Second Term.* Astronomy (5); Moral Philosophy and Political Economy in alternate years (3); German advanced (3); Essays and Criticism of Authors (1); Development of English Literature or Latin (3).

*Third Term.* Logic (3); Geology (4); Botany, Italian or Spanish (3); History of General Literature or Latin (3); Æsthetics (2.)

#### *Fourth Year.*

*First Term.* History (5); History of Philosophy (2); Geology and Physical Geography (2); General Literature and Ancient Oratory (2); Special study of Literature in its various Departments or Latin (4).

*Second Term.* History (5); Moral Philosophy and Political Economy in alternate years (3); Modern Languages or Latin (3); General Literature and Modern Oratory (1); Journalism and Forensic Eloquence (3).

*Third Term.* History (5); Lectures of non-resident Professors; Latin or Modern Languages (3); Original Orations, Extempore Debates, Criticism, with Analysis of Orators (3); preparation for Commencement.

#### THE COURSE IN ARTS.

The Curriculum in Arts, leading to the degree of Bachelor of Arts, extends over twelve terms, or four years. It includes the Greek and Latin Languages, and is similar to the usual Academic Course in the other Colleges and Universities in this country. It comprehends attendance, to the extent of at least fifteen hours a week, upon lectures and class exercises, embracing the following subjects:

#### *First Year.*

*First Term.* Algebra finished (5); Latin (4); Greek (4); Physiology (3).

*Second Term.* Geometry finished (5); Latin (4); Greek (4); English Construction (2).

*Third Term.* Trigonometry and Surveying (5); Greek (4); Latin (4); English Philology (2).

#### *Second Year.*

*First Term.* Physics (3); Chemistry (2); Greek (4); Latin (4); Rhetoric and Elocution (1).

*Second Term.* Physics (3); Greek (4); Latin (4); Roman History, Mathematics, French or German (4).

*Third Term.* Physics (3); Greek (4); Latin (4); History of the Roman Empire, Mathematics, French or German (4).

*Third Year.*

*First Term.* Psychology (3); Mediæval History (5); Essays (1); Greek, Latin, Modern Languages, Mathematics (6).

*Second Term.* Astronomy (5); Moral Philosophy and Political Economy, in alternate years (3); Essays (1); Greek, Latin, Modern Languages, Mathematics (6).

*Third Term.* Logic (3); Geology (4); Essays and Criticisms (1); Greek, Latin, Modern Languages, Mathematics, Botany (6).

*Fourth Year.*

*First Term.* History (5); History of Philosophy or Geology and Physical Geography (2); General Literature (1); Greek, Latin, Modern Languages, Mathematics (8).

*Second Term.* History (5); Moral Philosophy and Political Economy, in alternate years (3); General Literature and Modern Oratory (1); Greek, Latin, Modern Languages, Mathematics (6).

*Third Term.* History (5); Greek, Latin, Modern Languages, Mathematics (6); Lectures of Non-Resident Professors, Critical Analysis of Orators, Extempore Speaking (3); Preparation for Commencement.

II. *Optional Courses.*

Any student, after registration, instead of entering upon either of the General courses—Science, Literature or Arts—may select his own course, either with or without the view, after completing it, of applying to the Faculty for a degree. Those who adopt this method of choosing their own studies, are known as students in Optional courses. The only conditions limiting this freedom of choice are these: (1.) The student is permitted to take only such studies as he shall be fitted by his previous preparation to pursue. (2.) He can select in each term only such studies as are set down in the University programme for that term.

III. *Special Courses.*

The Special courses are those pursued by students who desire to devote themselves to any single branch of knowledge, or of knowledge combined with practice, and to study only such other branches

as may assist them in acquiring a thorough acquaintance with their specialty. Special students are under the immediate charge of the Dean of their College, and are required to employ so much time and to make such progress in their studies as shall be equivalent to the attendance upon the fifteen weekly exercises demanded of students in other courses. All special students are allowed to attend any lectures or exercises which take place in the University, and are not obliged to pass the usual term examinations, in any studies outside of their Special course, unless they wish to have their attendance reckoned as a part of their fifteen hours per week, or as a study toward a degree.

The first two years in the Special courses are *substantially* the same as in the Course in Science.

#### (1.) AGRICULTURE.

##### *Third Year.*

*Fall Term.* Chemistry, Agricultural (3), with four hours of laboratory practice; Geology, Agricultural, or Botany (3); Physics (3); Veterinary Anatomy and Physiology (5).

*Winter Term.* Chemistry, Agricultural (3), with six hours of laboratory practice; Horticulture and Arboriculture, or Vegetable Physiology (3); Physics (3); Veterinary Surgery (5).

*Spring Term.* Chemistry, Agricultural (4), with four hours of laboratory practice; Physics (3); Veterinary Medicine and Surgery (5).

##### *Fourth Year.*

*Fall Term.* Agriculture (soils, tillage and manures), (5); Chemistry, Agricultural, six hours of laboratory practice; History (5).

*Winter Term.* Agriculture (farm crops and animals), (5); History (5); Political Science (3); Rural Architecture (1); Strength and Preservation of Materials (2).

*Spring Term.* Agriculture (farm management, buildings and accounts), (5); Building Materials and Construction (2); Constitutional and Municipal Law (1); Preparation of Thesis.

#### A COURSE OF NINE TERMS, OR THREE YEARS.

##### *First Year.*

*Fall Term.* Algebra (5); Chemistry, Agricultural (4), with four hours of laboratory practice; English (2); Physiology (3).

*Winter Term.* Chemistry, Agricultural (3), with six hours of

laboratory practice; English (2); Linear Drawing (3); Geometry (5).

*Spring Term.* Botany (3); Chemistry; Agricultural (4); English (2); Geometry and Conic Sections (5).

*Second Year.*

*Fall Term.* Book-keeping (1); Botany, Agricultural and Economic, or Geology and Physical Geography (3); Chemistry, Agricultural, eight hours of laboratory practice; Veterinary Anatomy and Physiology (5).

*Winter Term.* Chemistry, Agricultural, twelve hours of laboratory practice; Horticulture and Arboriculture or Vegetable Physiology (3); Tools, Mechanical (2); Veterinary Medicine and Surgery (5).

*Spring Term.* Botany, Laboratory and Field Practice (2); Entomology (2); Trigonometry and Surveying (5); Veterinary Medicine and Surgery (5).

*Third Year.*

*Fall Term.* Agriculture (soils, tillage and manures), (5); Geology, Agricultural, or Botany (3); History (5); Physics (3).

*Winter Term.* Agriculture (farm crops and animals), (5); Horticulture and Arboriculture, or Vegetable Physiology (3); Physics (3); Political Science (3); Rural Architecture (1); Strength and Preservation of Materials (2).

*Spring Term.* Agriculture (farm management, buildings and accounts), (3); Building Materials and Construction (2); Constitutional and Municipal Law (1); Physics (3).

A ONE-YEAR SCHEME OF STUDY.

This scheme is designed for the special accommodation of young men who are or expect to become farmers, and who have received the best education that the public schools can give, but who can afford to spend only a short time in further study before engaging in their chosen occupation. It comprises most of the lectures on agricultural subjects in the fuller courses given above.

It is hoped that those who take and complete it, besides acquiring some new knowledge of the scientific principles that underlie their profession, and some ideas in regard to better modes of practice than those to which they have been accustomed, or at least of modes which are new to them, and may be worth testing, and some new and cor-

rect knowledge of veterinary science which may prove valuable in the management of their stock, will be incited to continue at home the studies that can only be begun in such a limited and narrow course as this must of necessity be.

As students will be admitted to this course in the College of Agriculture, *without the entrance examination in Algebra* which is required before entering upon *any* other course of study in the University, they will be strictly confined to it; nothing can be taken from it, nor can anything be added to it, whether in the way of attendance upon exercises in other departments of the University, or of taking private instruction with a view to entering the University in full standing at some future time. This plain statement is made in order to guard the provision requiring an examination in Algebra, before becoming a regular member of the University, from any violation in consequence of this special arrangement made by the College of Agriculture.

It is required of the applicant for admission to this course of study that he shall pass the same examinations in Geography, English Grammar and Arithmetic as are required of all applicants for admission to the University, and that he shall possess some practical knowledge of the operations of farming.

The course of study is as follows:

*Fall Term.* Agriculture (5); Agricultural Chemistry (3); Physiology (3); Veterinary Science (5).

*Winter Term.* Agriculture (5); Agricultural Chemistry, with four hours of laboratory practice (3); Agricultural Geology (1); Rural Architecture (1); Veterinary Science (5).

*Spring Term.* Agriculture (5); Agricultural Chemistry (4); Botany and Horticulture, with field practice (3); Veterinary Science (5).

Besides the exercises in the class-room and laboratory, as laid down in the above schemes, the student who is following the full course will be expected to devote four hours a week, during the second and third years, and six hours a week during the fourth year, to horticultural and agricultural practice in the gardens or fields; in the winter term, however, a much smaller amount of time will suffice for all the out-door work of an instructive as well as useful character that can be done. The student in the three years' course, or one pursuing an optional agricultural course for a shorter period, will be expected to devote a corresponding amount of time to this out-door practice. It should be considered, and will be made as far as possible

with the means at command, an essential part of his course of instruction, and no compensation will be allowed for it.

(2.) ARCHITECTURE.

*Third Year.*

*Fall Term.* Integral Calculus; Descriptive Geometry; Lectures on Egyptian and Greek Architecture; Drawing.

*Winter Term.* Mechanics; Descriptive Geometry; Lectures on Roman Architecture; Drawing.

*Spring Term.* Mechanics; Geology; Shades, Shadows and Perspective; Letters on Byzantine and Romanesque Architecture; Drawing.

*Fourth Year.*

*Fall Term.* Stereotomy; Geology and Physical Geography; Lectures on Gothic Architecture; Drawing; Photography.

*Winter Term.* Mechanics applied to Construction; Lectures on Renaissance and Modern Architecture; Lectures on Composition and the Art of Designing; Drawing.

*Spring Term.* Lectures on Sculpture, Painting, Glass, Mosaic, Tilling, Decoration, Ventilation, Warming, Acoustics, Contracts, Specifications, Measuring, Professional Practice, etc.; Drawing Exercises in Designing.

(3.) CHEMISTRY AND PHYSICS.

This course is intended to prepare students for the practice of Chemistry as a profession, and to fit them, as far as it is possible to do so by school-work, to fill positions as teachers or as analytical chemists; and it is designed particularly to provide such a general knowledge of chemical science, for those who wish to take up the special problems of technical chemistry in manufactories, as will afford a good basis for their subsequent investigations. The course comprises the studies of the first two years in the General Course in Science; although laboratory practice may be substituted for the mathematics and history in the winter and spring terms of that year. During the third and fourth years, the study of Physics, Mineralogy and Geology, together with that of Chemistry, will be pursued. The exercises required by the College, in its full course, will include the repetition of lecture experiments in the laboratories; the preparation of chemical substances; laboratory practice in qualitative and quantitative analysis; the use of the blow-pipe in the determination of

minerals and ores; assaying, and organic analysis. Six hours a day of work in the laboratory, with deduction of lecture hours, are required during the last two years.

#### (4.) ENGINEERING AND SURVEYING.

The full course of Civil Engineering embraces twelve terms, or four years, and leads to the degree of Bachelor of Civil Engineering. Special instruction begins with the third year, and includes the following subjects: Descriptive Geometry and its application to shades, shadows and perspective, to masonry and stone-cutting in the construction of arches, domes and staircases, and to carpentry in the construction of bridges and roofs; Surveying and the use of instruments, including the plane-table as used in the United States Coast Survey, with field practice; Draughting in its various branches; Analytical Mechanics and its application to the principles of construction. Besides this, there are two courses, one in Surveying and the other in Draughting, for the completion of either of which a Licentiate certificate is conferred.

The course of Surveying comprises the following subjects; Algebra; Geometry; Trigonometry; Mensuration; Descriptive Geometry; Surveying; Plotting; Topographic and General Map Drawing.

The course in Draughting embraces the following: Algebra; Geometry; Trigonometry; Mensuration; Descriptive Geometry; Shades, Shadows and Perspective; Shading and Tinting applied to Drawings of Construction.

#### *Second Year.*

*First Term.* Analytical Geometry (4); German (5); Physics (3); Chemistry (2); Rhetoric and Elocution (1).

*Second Term.* Differential Calculus (4); German (5); Physics (3); Chemistry (2); Rhetoric and Elocution (1).

*Third Term.* Differential Calculus [Church's] (4); German (5); Physics (3); Botany (3); Rhetoric and Elocution (1).

All students are advised to take the advanced French three times a week through the year, with the students in the course in Science.

#### *Third Year.*

*Fall Term.* Integral Calculus; Analytical Geometry of three dimensions; Modern Higher Geometry; Descriptive Geometry; and Draughting.



*Winter Term.* Analytical Mechanics; Descriptive Geometry; Topographical Projection; and Draughting.

*Spring Term.* Analytical Mechanics; Shades, Shadows and Perspective; Isometric Projection; Draughting; and Surveying.

*Fourth Year.*

*Fall Term.* Analytical Mechanics; Stereotomy; and Draughting.

*Winter Term.* Civil Construction; Stereotomy; and Draughting.

*Spring Term.* Civil Engineering; Draughting; Instruction in the Use of and Field Practice with the Plane-Table; and Preparation of Thesis.

(5.) HISTORY AND POLITICAL SCIENCE.

The historical and political sciences are taught in this College chiefly by lectures, but in early modern history there are regular class exercises, the text-book being Gibbon's "Decline and Fall of the Roman Empire." The lectures upon history are so arranged as to form a chronological sequence—ancient history being followed by the early modern period, that by the mediæval and later modern history, and that again by the history of England and the constitutional history of the United States. The elementary facts bearing upon the history of the principal continental nations of Europe are taught in the College of Languages—much of the collateral reading recommended being in French and German. The student, therefore, comes to the lectures prepared to avail himself of the opportunities they offer. Special attention is also paid to Greek and Roman history in connection with the study of the classes in the Course in Arts. The College is well supplied with illustrative material in the shape of mural charts, photographic views, portraits, casts, and diagrams—the collection including the historical wall maps of Spruner and Bretschneider, the political wall maps of Sydow, and the various special charts issued by Kiepert and others. In connection with the lectures, students are expected to make constant use of the University library—which is well supplied with works on ancient, English, American, and general history—and thus to enlarge, by careful reference and reading, their acquaintance with the facts presented by the lecturers. The examinations in history are chiefly by written papers; and theses on historical subjects are occasionally required. The main efforts of the professors are given to imparting a good knowledge of



general history, to developing ideas of the philosophy of history, and to bringing this knowledge to bear upon the most important points of modern history.

The School of Political Science, which forms a division of the College, is intended to embrace all the important topics connected with political and social science. At present, courses of lectures are delivered, as will be seen below, on political economy and constitutional law.

The following is a list of the lectures given in the College:

(1.) A course of lectures on ancient and early modern history by Professor Russel. (2.) Modern history in general, and the philosophy of modern history, by President White. (3.) The general and constitutional history of England, by Professor Goldwin Smith. (4.) General history, and the philosophy of history, by Professor Wilson. (5.) History of the United States, by Professor Greene. (6.) American constitutional history, by Professor Dwight. (7.) Political economy, by Professor Wilson.

Courses are given by President White, Professor Russel, Professor Goldwin Smith and Professor Wilson during each term, while the course by Professor Greene occurs in the Fall term, and that by Professor Dwight in the Spring term. During the present year, a course of special lectures was delivered by James Anthony Froude.

#### (6.) MECHANIC ARTS.

Through the liberality of Hon. Hiram Sibley in providing a suitable building, and the further donation of \$10,000 for its equipment, this College has been placed, during the past year, on a better footing than heretofore. There are now closely connected with the lecture room, in which the *theoretical* side of the College is presented, other rooms for the designing and modeling of machinery, and workshops fitted with power and machinery for working in wood and the metals, in which the *practical* side will be conducted. Here students will practice under the direction of the superintendent; and it is hoped that some who are skilled in the use of tools may, by designing machinery and by working upon models and apparatus, do something toward paying their expenses. Labor in this College will be paid according to value produced.

#### *Third Year.*

*Fall Term.* Church's "Differential Calculus;" Descriptive Geometry, with Shades, Shadows and Perspective; Lectures.

*Winter Term.* Church's "Integral Calculus;" Elements of Mechanism; Machine Construction and Drawing (Warren's); and Lectures.

*Spring Term.* Principles of Mechanism (Willis'); Machine Construction and Drawing (completed); and Lectures.

*Fourth Year.*

*Fall Term.* Study of the Moving Forces employed in the Arts, with special reference to water wheels and steam engines; Machine Drawing.

*Winter Term.* Machine Drawing; Moral Philosophy; Political Science; and the Study of the Steam Engine.

*Spring Term.* Machine Drawing; Architecture; Rural Economy; and Preparation of Thesis.

(7.) MILITARY SCIENCE.

To this College is confided the execution of that provision of the national act of endowment which requires that instruction be given in military tactics. As such instruction demands an aggregation of numbers to give it effect, attendance upon *military exercises* is made obligatory on every able-bodied student, with power vested in the President and Faculty to grant special exemptions therefrom for adequate reasons. On the other hand, the advanced course of instruction in *Military Science* is left optional with students, and is open to undergraduates in any of the General courses, and to such special students as may have sufficient scientific and practical preparation to pursue it profitably.

*Military Science.* This course requires, from those who pursue it, an attendance upon a class exercise or lecture of one hour's duration, on three days of the week during one academic year, and comprehends the following subjects:

(1.) *Military Engineering.* To comprise the principles of military topography; the effect of projectiles; the principles of fortification, with their application to field works; description and nomenclature of permanent fortifications; military mining; the attack and defense of works, and military roads and bridges.

(2.) *The Art of War.* To comprise the history and principles of special tactics; The organization of armies, with some account of the administrative arrangements of our own army; strategy; grand tactics; and accessory operations of war.

(3.) *Military Law.* To comprise the origin, principles and limitations of military law; nature and force of the articles of war, and the general regulations for the army; a summary of the rules of evidence; the constitution, jurisdiction and procedure of courts-martial, courts of inquiry, military commissions and military boards.

[In consequence of the vacancy in the office of Commandant and Professor of Military Science, this part of the course has not been carried out during the past year.]

#### (8.) NATURAL HISTORY.

The studies in this course have been arranged in this College with special reference to the needs of students intending to become naturalists, or physicians, or scientific agriculturists, which include all the natural sciences and a fair amount of the modern languages, with only so much of mathematics as every well-educated man should have.

##### *First Year.*

*Fall Term.* Physiology (3); English Diction (2); French or German (5); Laboratory Practice (Anatomy) (5).

*Winter Term.* Comparative Anatomy or Homologies (2); English Diction (2); French or German (5); Laboratory Practice (Anatomy) (5).

*Spring Term.* Zoölogy, general or special (2); English Construction (2); French or German (5); Physiological Botany (3); Laboratory Practice (Botany) (3).

##### *Second Year.*

*Fall Term.* Systematic Botany (3); Chemistry (2); Rhetoric and Elocution (1); German or French (5); Laboratory Practice, in Botany (2), in Chemistry (2); Rhetoric and Elocution (1); German or French (5); Homologies or Comparative Anatomy (2); Laboratory Practice in Botany (2), in Chemistry (2).

*Spring Term.* Zoölogy, special or general (2); Chemistry (laboratory practice) (2); German or French (5); Laboratory Practice (Botany), (5); Rhetoric and Elocution (1).

##### *Third Year.*

*Fall Term.* Mechanics (3); Veterinary Anatomy and Physiology or Special Botany (5); English Essays (1); Psychology (3); History or Advanced French or German (3).

*Winter Term.* Palæozoölogy (3); Veterinary Medicine and Surgery or Horticulture (5); English Essays (1); Agriculture (Gould) (1); Laboratory Practice (Palæozoölogy) (5).

*Spring Term.* Geology and Physical Geography (4); Heat (3); English Essays (1); Constitutional Law (1); Veterinary Medicine and Surgery or Laboratory Practice in Geology (5).

#### *Fourth Year.*

*Fall Term.* Geology and Physical Geography (2); Political Economy (3); English General Literature (1); History (Wilson) (2); Preparation of Thesis (5).

*Winter Term.* Electricity and Magnetism (3); English, General Literature (2); Astronomy (5); Preparation of Thesis (5).

*Spring Term.* Acoustics and Optics (2); Oratory (3); Logic (3); Lectures of non-resident professors and preparation of Thesis (5).

#### 9. REQUIREMENT FOR ADMISSION.

Candidates for admission must be, if males, at least sixteen years of age, and if females, eighteen.

All candidates, no matter what may be the course of study they intend to pursue, must pass a thoroughly satisfactory examination in the following subjects: (1.) Geography. (2.) English Grammar, including Orthography and Syntax. (3.) Arithmetic, and (4.) Algebra through Quadratic Equations.

In the case only of students admitted to the *one year's* course in Agriculture is Algebra omitted; the other examinations are required of them as other students.

And in view of the fact that the "Metrical System" is allowed by law to be used in this country, and the extensive use of it in all computations and announcements in chemistry and physical science generally, it is earnestly recommended that all persons offering themselves for examination make themselves acquainted with it.

This general examination will admit them to the University as *optional* students, or as students in the Course of Science, or in the Special Courses of Agriculture, Chemistry and Physics, or the Mechanic Arts.

For the course in Civil Engineering, besides this general examination, they must be further examined in six books of Plane Geometry.

For the course in Natural History, besides the general examination described above, they must be examined in six books of Geometry;

Plane Trigonometry; Allen's Latin Reader, or some equivalent for it, with an adequate amount of grammatical knowledge; Greek, the alphabet and enough of the language to enable the student to recognize, analyze and form scientific, technical terms; Physiology, an acquaintance with the technical terms employed in the science, including the names of all the organs and tissues and general functions.

For the course in Literature, besides the general entrance examination, they must be examined in Plane Geometry, six books, and in Latin Grammar, including Prosody; Composition (Arnold's first twelve chapters); Allen's Reader, or four books of Cæsar's Gallic War; Virgil, exclusive of the last six books of the *Æneid*; Cicero, six Orations.

For the course in Arts, or the Classical Course, the examination will be the same as for the course in Literature (including the general entrance examination), with the addition of an examination in Greek; Greek Grammar (Goodwin's is preferred); writing Greek, with the accents; the first one hundred and eleven pages of Goodwin's Greek Reader (or four books of Xenophon's *Anabasis*); the first three books of the *Iliad*, omitting the catalogue of ships; Smith's *Smaller History of Greece*.

#### 10. EXERCISES, RECITATIONS, ETC.

For all students in general or optional courses, there are three exercises, recitations or lectures required daily for every day in the week except Saturday. For students in special courses, an amount of study, etc., is required equal to the three recitations or lectures, though it may be given continuously to one particular branch of study, as Chemistry, Veterinary Surgery, etc.

Each term begins with religious exercises in the room used at present for a chapel in South University building, and there are daily prayers, with the reading of a portion of Scripture, also, in the same room at eight o'clock A. M., throughout the year.

#### 11. EXAMINATIONS.

Examinations are held at the end of each term, devoting at least one week to them. They are conducted partly in writing, partly orally, and the method of conducting them is left to each Professor in his own department. In some cases an examination in a particular study is held during a term, in case the subject has been completed;

but in all studies, and for all students, examinations are required. These examinations are made very strict and thorough. Each student must pass each term in studies enough to have occupied him for at least three hours per day during the entire term in recitations and lectures, beside the amount of time and study required in preparation and in writing up his notes on the lectures; and no student is allowed to go on in any study without having passed, at least once in each term, a satisfactory examination in that study. Nor is any student allowed to remain in the University at all, who does not pass satisfactorily, each term, his examination in some three studies that have had daily recitations or lectures; or, in case he has had but two or three recitations in some one of his studies, he must take others to make up the fifteen recitations and lectures per week during the term, and pass his examination satisfactorily in a number that is equivalent to these three daily recitations. This rule does not apply to special students having but one department. In this case, however, progress equal to the three daily exercises is rigorously required.

## 12. MODE OF INSTRUCTION.

During the first two years, in all the courses, the instruction is effected mostly by recitations from text-books, but by lectures whenever the subject admits of that mode of teaching. But after the student has had sufficient drill of this kind, the system of teaching by lectures and frequent examinations is adopted, as being, in the estimation of the Faculty, best calculated to educate the mind of the student to a capacity for independent and self-reliant thinking, and for giving him a general and comprehensive view of the whole subject and of the history and literature pertaining to it. The apparatus, etc., for illustrating the various branches taught are, as will be seen below, most ample. In the case of lectures, the students are required to take notes, and to look up and consult books referred to; so that the lecture system, instead of being a relief, is found to be more exacting in its demands upon the time and labor of the student than mere preparation for recitation would be. It also requires more maturity of mind, and the exercise of more discretion and judgment in the choice of authorities.

## 13. DISCIPLINE.

The University proposes to treat its students as men rather than as mere boys, assuming no further control over them than is neces-

sary to secure the accomplishment of the objects for which students resort to it. For this purpose, a few general rules have been found necessary. These rules provide, among other things, that every student, unless specially excused by the Faculty, shall attend at least fifteen recitations, or their equivalent in lectures and laboratory practice, each week, and that no student shall take an optional course that is not approved by the Faculty as worthy of his time and efforts. Any student having occasion to be absent from his duties, must obtain a leave of absence from the President or Vice-President; and in case he absents himself without leave for more than three consecutive days, he is regarded as having withdrawn from the University, and will not be allowed to return without the consent of the Faculty. Any student found guilty of intoxication, or other gross immorality, will be at once dismissed. And so, likewise, any student who so far neglects his duties as to fail to pass his term examinations satisfactorily, loses his position in the University. He may, at the discretion of the Faculty, be allowed to reënter once again, on probation, in optional courses. But the occurrence of a second failure is regarded as indicative of either incapacity or such a want of application as to render his further connection with the University impracticable.

#### 14. GRATUITOUS INSTRUCTION.

By the act of incorporation, it is provided that one student each year may be appointed from each Assembly District in the State, who shall be entitled to gratuitous instruction. This has been interpreted to imply an appointment for four years; so that the district may appoint one student each year, and thus, after the third year of the University's existence as an educational institution, each district may have four students in the University receiving an education free of charge for tuition.

Besides this, there is provision for the payment of students for labor performed on the University premises. The results have shown that young men having some trade available for the University, as that of carpenter, mason or machinist, have in many cases mainly, and in some cases entirely, supported themselves while carrying on their studies. For such there is much work on the University buildings. The University Press, also, affords to practical printers the opportunity of acquiring a University education. Yet no young man should come to the University entirely without resources. It is not always possible to set a student at work



at once; and even if it were possible, there are always some extra expenses at the outset, attendant upon settling down in new quarters and making provision for a course of study. In no case is self-support, to any extent, an easy task. It requires energy, persistence and sacrifice, and it is greatly to the advantage of the most determined student to have earned something, so that his energies in the University shall not be too much diverted from mental to manual labor.

Besides this, there are prizes offered to the amount of several hundred dollars, which serve both as an incentive to study and as a reward for exertion.

The present charge for tuition is fifteen dollars per term, or forty-five dollars per year.

## 15. DEGREES ESTABLISHED IN THE UNIVERSITY.

### (1.) DEGREE OF BACHELOR.

The degree of Bachelor of Science is conferred upon such students as have successfully pursued the Curriculum in Science. It will also be conferred upon those students who, after having passed through the first two years of the General course in Science, or any equivalent course, shall have also completed a Special course in any College, and, in addition thereto, shall have attended the courses of lectures on General Agriculture; on Constitutional History, and on Political Economy.

The degree of Bachelor of Literature is conferred upon such students as have successfully pursued the Curriculum in Literature.

The degree of Bachelor of Arts is conferred upon such students as have successfully pursued the Curriculum in Arts.

The degree of *Bachelor* has also been established for each of the following Special courses: Civil Engineering, Veterinary Medicine, Architecture, Mechanical Engineering and Agriculture.

Any student who has pursued an optional course of study, such as may be equivalent, in the judgment of the Faculty, to either of the General courses, can receive the baccalaureate degree appropriate to that course. But students should understand that, in estimating the course that has been pursued, not the time only that has been devoted to the studies will be regarded as important, but the studies must be of the same general character as those in the regular course in regard to both the variety of the knowledge obtained and the disciplinary effect upon the mind.



## (2.) ADVANCED DEGREES.

Any student who has taken the Bachelor's degree in any course may take the Master's degree in the same course, on either of the following conditions:

1. After three years spent in literary pursuits, either teaching or study (which study shall not have been exclusively professional), on passing an examination in some department of Science or Literature, and presenting to the Faculty a satisfactory thesis on some subject agreed on between the student and the Faculty. Or,

2. After having passed one year in Scientific or Literary studies, either at this University or elsewhere with the consent and approval of the Faculty, on passing his examinations and presenting a satisfactory thesis on some subject within the department of study to which he has chiefly devoted his attention.

The degree of Doctor of Philosophy is conferred only upon such Bachelors of Arts, of Literature or of Science as, having a knowledge of the Latin language equal to that now required for admission to the Classical course in the University, shall have pursued their studies in Science or Literature for at least two years after graduation under the direction of the Faculty, and, having passed a satisfactory examination therein, shall have presented a meritorious thesis based on an original investigation in one of the departments in which they have studied; provided, however, that they have taken their studies in such courses, not strictly professional in character, as have been or hereafter may be specifically established for resident graduates.

3. The degree of Civil Engineer is conferred upon such Bachelors of Civil Engineering as, after six terms or two years of additional study and practice, shall have passed the requisite examinations in the School of Engineering.

4. The degree of Doctor of Veterinary Medicine (D. V. M.) is conferred on those students who have spent two years in additional study, after receiving the degree of B. V. S., and who shall have passed satisfactory examinations therefor.

5. The degree of Architect is given to any Bachelor in Architecture who shall pursue a post-graduate course of two years in the study and practice of Architecture in the University.

## 16. LIBRARY, APPARATUS, ETC.

The various collections of the University have been carefully formed, with the view of making them, as an apparatus of study, as

efficient as possible. They are accessible to all undergraduates; under such rules, however, as the Faculty may deem necessary for their preservation and continued utility.

1. *The University Library*, which is rapidly increasing in size, numbers, at present, 37,000 volumes. It is made up of the following named collections: (1.) A selection of about 5,000 volumes purchased in Europe, in 1868, and embracing the more recent and valuable works illustrative of the subjects of agriculture, the mechanic arts, chemistry, engineering, the natural sciences, physiology, and veterinary surgery. (2.) The collection of works, numbering about 4,000 volumes, in history, English, French, German and Italian literature, forming a portion of the President's library, but deposited for the use of the faculty and students. (3.) The Anthon library, of nearly 7,000 volumes, consisting of the collection made by the late Professor Charles Anthon, of Columbia College, in the ancient languages and literature, besides a great number of valuable works on history and general literature. (4.) The Bopp library, about 2,500 volumes, being the collection of the celebrated Franz Bopp, of the University of Berlin, relating almost wholly to Oriental languages, Oriental literature, and general comparative philology. (5.) The Goldwin Smith library, 3,500 volumes, presented in 1869 to the University by Professor Goldwin Smith, comprising chiefly historical works and editions of the English and ancient classics, and which, during the past year, has been largely increased by the continued liberality of the donor. (6.) The publications of the Patent Office of Great Britain, about 2,500 volumes, of great importance for the student of technology and for scientific investigators in general. (7.) The White Architectural library, a collection of over 1,000 volumes, many of them very important works, relating to the science of architecture and kindred branches, presented to the institution by President White during the past year; accompanying the gift was the sum of \$1,500 for its increase. (8.) The Kelly Mathematical library, comprising 1,800 volumes and 700 tracts, bestowed upon the University by the late Honorable William Kelly, of Rhinebeck. (9.) The Cornell Agricultural library, bought by the Honorable Ezra Cornell, chiefly in 1868. (10.) The Sparks library, being the library of the late Jared Sparks, the eminent historian and president of Harvard University, consisting of upward of 5,000 volumes and 4,000 pamphlets, relating chiefly to the history of America, which was purchased in January, 1872. There are, besides, some smaller special collec-

tions of interest, such as the May collection on the history of slavery and anti-slavery, the nucleus of which was formed by the gift of the library of the late Rev. Samuel J. May, of Syracuse.

The library, which has been lately transferred to its new quarters in the McGraw building, is arranged in departments upon a system of classification based upon that of Brunet, and a slip catalogue of the whole collection is in a state of rapid progress. Separate alphabetical catalogues, with analytical indexes of each department, will be issued as early as possible, the first one—mathematics—being now in the press, to be soon followed by the second of the series, embracing architecture. The library is open and accessible to all registered students every week day from 8 A. M. to 5 P. M. Connected with it is a reading-room, containing eighty-one of the most valuable periodicals in the English, French and German languages.

2. *Museum of Geology and Mineralogy.* This museum comprises: (1.) The Jewett Palæontological collection, embracing a large number of species of fossils, principally from the New York formations, many of which are illustrated by type specimens figured and described in the Report of the New York State Geological Survey. (2.) A considerable collection of fossils and rocks illustrating the geology of Ithaca and vicinity. (3.) The Hartt collection of fossils and rocks, mainly from the British provinces and Brazil, deposited in the museum. (4.) The Brazilian collections of fossils and rocks, made by Professor Hartt and his party on his two expeditions to the Amazonas in 1870 and 1871. (5.) The Ward collection of casts of fossils, presented to the museum by Mr. Cornell. (6.) Miscellaneous collections of fossils, rocks and ores, from various parts of the world, obtained through exchange or gift. (7.) A collection of Indian antiquities, made by Professor Hartt, Mr. Derby and Mr. Barnard, on the Amazonas in 1870 and 1871. (8.) The Silliman Mineralogical Collection. (9.) A collection of skeletons from the Anglo-Saxon cemetery at Frilford, England, together with a variety of ethnological relics taken from the same place; the whole presented by Professor George Rolleston, of the University of Oxford.

3. *The Museum of Botany and Agriculture* contains the following: (1.) The Botanical Model Collection, being a series of *Modèles Clastiques* of plants, on a magnified scale, made by Auzoux of Paris, and the two series of plant models designed and executed by Brendel, of Breslau. (2.) The Rau Models, being 187 models of plows made at the Royal Agricultural College of Würtemberg, under the

direction of Professor Rau, and arranged and classified by him for the Paris Exposition of 1867. (3.) Engravings and photographs of cultivated plants and animals obtained at the various agricultural colleges of Europe. (4.) The Auzoux Veterinary Models, being the entire series used at the government veterinary colleges of France and Russia. (5.) A collection of cereals of Great Britain, being a duplicate of that in the Royal Museum of Science and Art at Edinburgh, presented by the British government. (6.) A collection of woods of upward of 300 varieties, presented by Professor Wilson of the University of Edinburgh. (7.) The Horace Mann Herbarium, containing several thousand specimens, purchased by President White and presented to the University. (8.) A considerable collection of wools, fruits, dry and alcoholic plants, collected in Brazil on the two expeditions of Professor Hartt, by Professors Prentiss and Hartt and Mr. Derby. (9.) A cabinet of tools and implements, either of the actual size or in the shape of models.

4. *The Collections in the Museum of Zoölogy*, which are available for the educational purposes of the University, are made up of the following: (1.) The Greene Smith Ornithological Cabinet, a mounted and classified collection of 362 birds, principally American, made and presented to the University by Mr. Greene Smith, of Geneva. (2.) The Newcomb Conchological Collection, made on the South Atlantic and Pacific coasts. (3.) The *Modèles Classiques* of Dr. Auzoux, of Paris, illustrative of comparative anatomy and physiology. (4.) The illustrative charts and diagrams edited by Achille Comte, of Paris, and those published under the auspices of the Council of Education at London. (5.) A constantly increasing collection of native animals in alcohol, and of preparations illustrating their structure. (6.) A collection of insects, deposited by Professor Wilder, so arranged as to indicate what kinds are injurious to vegetation and what are beneficial. (7.) A collection of Lepidoptera, made by Mr. W. D. Scott, a special student in zoölogy, to illustrate especially the transformation of the larger moths. (8.) Various anatomical and zoölogical specimens deposited by Professors Wilder and Hartt.

5. *The Museum of Technology and Engineering* comprises: (1.) A collection of working models in brass and iron, illustrative of mechanical principles applied to machinery, and an extended series of photographs for the same purpose, from the establishment of Schröder, of Darmstadt. (2.) Another collection of working models

in wood and iron, illustrative of intricate mechanical combinations and expedients, made under the direction of Professor Willis, of Cambridge, England, and of Professor Rigg, of the College of Mechanics, at Chester. (3.) Models illustrative of descriptive geometry, and bridge and roof construction, made by Schröder. (4.) The diagrams and charts issued with the sanction of the English Committee of Council on Education. (5.) Photographs and models from various sources. (6.) A collection of engineering instruments.

6. *The Foundation of a Museum of the Fine Arts* has been laid by deposit in the University, for the use of the Faculty and undergraduates, of the following: (1.) The White Collection of Historical Medallions, including, among other things, all the casts of Eichler, of Berlin, namely, 2,000 copies of antique gems in the Royal Museum, at Berlin, illustrative of ancient history and art; over 500 casts illustrating mediæval renaissance, history and art; some 400 medallion portraits of eminent personages in modern history, derived from authentic portraits. (2.) A valuable collection of photographs, especially rich in illustrations of architecture and of art applied to manufactures. (3.) Paintings in oil, including full-length portraits of Professors Goldwin Smith and George William Curtis, by Carpenter, presented by President White. (4.) Bronze copies of masterpieces of statuary, two busts by Burton, one of President White, the gift of some friends of the President, and the other of Professor Wilson, the gift of the students of the University. (5.) Many portfolios of engravings illustrative of Christian art, and of the history of art in general, including the publications of the Arundel Society and the Berlin Museum series.

#### 17. NEW BUILDINGS.

The Sage College for Women is the gift of Henry W. Sage, and is now in process of erection. It is to be quadrangular in form, 168 feet front, forty-one feet deep and four stories in height. The north wing will be eighty-five feet long and the south wing 112. It is to be of brick with stone trimmings. The gymnasium nearly connects the wings in the rear. The rooms for the students are eighteen feet by fourteen, with a low board partition dividing off one part for a sleeping room. The building is designed to accommodate about 100 pupils and will be completed in the spring of 1874. Besides the dormitories for the pupils it will contain lecture and recitation rooms, a museum, laboratories for students in Botany, with green-houses, forc-

ing-houses and other necessary facilities for the pursuit of floriculture and ornamental gardening.

Plans have also been prepared for a University chapel to accommodate, at first, about 500 persons, with a side chapel for a smaller number when occasion may require its use; the building will be commenced early in the spring and finished as soon as practicable; the money to pay for its erection is the gift of the same noble benefactor that gave us the Sage College, Hon. Henry W. Sage. The plan of the building is such as to admit of an ultimate enlargement to accommodate 1,200 or 1,500 persons.

18. UNIVERSITY FARM AND BUILDINGS.

University farm and buildings.....	\$55,000 00
University buildings, to wit:	
Two four-story and basement stone buildings, each 50 by 164 feet.....	160,000 00
One two-story building of wood, 120 feet front, with two wings, each 100 feet in depth, called the Laboratory .....	28,520 00
One four-story stone building, 200 feet front by 60 feet in depth, in process of erection, called the McGraw Library, cost to this date.....	130,000 00
One three-story stone building, 100 feet by 50 feet, called the Sibley Mechanical Department.....	50,000 00
Building for Department of Veterinary Surgery..	250 00
Total.....	<u>\$418,770 00</u>

19. OTHER UNIVERSITY PROPERTY AND RESOURCES.

Ezra Cornell's Endowment.....	\$500,000 00
Share in Cascadilla Place property, occupied by the University .....	16,240 00

There are also 500,000 acres of western land, for which we are receiving no income, the profits arising from the sales of which, when sold and paid, are to be added to the College Land Scrip Fund and the Cornell Endowment Fund.

The College Land Scrip Fund, reported above at \$473,402.87, represents it as it was on the 30th day of September, 1871, and shows an increase of \$18,787 over the amount as it stood on the 30th day of September preceding.

So, likewise, the Cornell Endowment Fund is \$128,596.61, and represents an increase of \$11,427.20 over the amount of the same fund as it stood on the 30th day of September, 1870, making in all an increase of productive fund of \$30,214.20.

#### 20. INCOME.

Received as tuition from students....	\$23,552 50	
Less amount allowed on State student certificates .....	5,385 00	
		<u>\$18,167 50</u>
Received for rent of rooms .....	6,524 68	
From Cornell Endowment, etc., etc.....	80,000 00	
		<u>80,000 00</u>
Total , .....		<u>\$104,692 18</u>
Paid to members of the Faculty.....		<u>\$58,514 65</u>

#### 21. LIBRARY.

Total of vols., books, pamphlets, 47,500; cost.....	<u>\$82,487 66</u>
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#### 22. ILLUSTRATIVE COLLECTIONS.

Palæontological cabinet .....	\$11,000 00
Geological cabinet .....	10,000 00
Mineralogical cabinet .....	5,250 00
Conchological cabinet .....	16,000 00
Ornithological cabinet .....	8,500 00
Agricultural cabinet, cereals, etc.....	7,375 00
Botanical herbarium.....	1,000 00
Metallurgical cabinet.....	50 00
	<u>50 00</u>
Total.....	<u>\$59,175 00</u>



23. APPARATUS AND MODELS.

English Veterinary Instruments .....	\$94 00
English Models of Machine Movements (Riggs)....	210 00
French Clastic Models, illustrative of Anatomy and Physiology, Comparative Anatomy, Zoölogy, Botany and Veterinary Surgery.....	3,990 00
French Philosophical Apparatus and Models .....	1,817 00
German Chemical and Philosophical Apparatus....	4,137 00
German Models of Machine Movement .....	533 00
German Botanical Models (Bourdel's) .....	60 00
German Agricultural Models (Rau's Plows).....	666 00
American Chemical and Philosophical Apparatus ..	1,725 00
American Instruments, Civil Mech., Engineering ..	1,475 00
American Mechanical Models .....	1,700 00
Agricultural Models .....	875 00
Total.....	<u>\$17,282 00</u>

24. FURNITURE, TOOLS, MACHINERY, LIVE STOCK, BELLS, AND  
PRINTING PRESSES AND TYPE.

Furniture in University buildings.....	\$7,000 00
Chime of nine bells .....	3,400 00
Great bell of the University.....	2,440 00
Live stock on farm.....	3,500 00
Agricultural tools and machinery .....	2,875 00
Printing presses, type and material.....	7,565 00
Machinery, lathes, drills, etc. ....	5,580 00
Total.....	<u>\$32,360 00</u>

25. SUMMARY.

University farm and farm buildings ..	\$55,000 00
University buildings .....	363,770 00
Library.....	68,487 66
Illustrative collections .....	59,175 00
Apparatus and models .....	17,282 00
Furniture, tools, machinery, presses, etc. ....	32,360 00
	<u>\$596,074 66</u>



Total farm and buildings.....	\$418,770 00
Total of productive endowment.....	1,118,239 48
Total of income from tuition and rents .....	24,692 18
Total of libraries and cabinets.....	197,304 66
Total of amount paid for instruction.....	58,514 65

## 26. CONCLUDING REMARKS.

During the year there has been quite an advance on last year's announcement, both in the conditions of admission and the requirements for graduation. But beside these changes which can be expressed in words, there has been, as we believe, a still greater advance in the stringency of the examinations for admission and also in the term examinations of admitted students. It still continues to be the case that of all that present themselves for admission not one-half are properly fitted, and nearly one-fourth are rejected. The greatest deficiencies in preparation are found in English Grammar and Mathematics, and especially in that part of Algebra that treats of radical quantities. There is also great deficiency in preparation in the Latin and Greek.

Besides those who are rejected at their entrance examinations, a comparatively large number fall out during the first year in consequence of insufficient thoroughness of preparation. Others, doubtless, fall out for lack of application or want of natural ability.

At the beginning of the third term of last year, the executive committee passed a resolution directing the admission of women to the University. In pursuance of this, sixteen young women have been admitted, one of whom has entered upon a Post-Graduate course; and women are to be hereafter admitted on the same conditions as young men, except that they must be at least eighteen years of age.

During the year, three new degrees for students in special courses have been established, namely: the degrees of Bachelor of Architecture, Bachelor of Mechanical Engineering, and Bachelor of Agriculture.

Provision has also been made for religious instruction by a series of discourses from eminent divines of different religious denominations.

For the Trustees.

EZRA CORNELL,

*Chairman Trustees.*

GEORGE W. SCHUYLER,

*Treasurer.*

W. D. WILSON, *Registrar.*

## XX. COLLEGE OF THE CITY OF NEW YORK, NEW YORK CITY.

*To the Regents of the University of the State of New York :*

The Trustees of the College of the City of New York submit the following report for the collegiate year ending on the 28th day of June, 1872, containing a just and true statement of facts, showing the progress and condition of the College during and at the close of the year, in respect to the several subject-matters following, viz. :

### 1. TRUSTEES.

The following is a list of the Trustees of the College, with their respective places of residence :

Bernard Smyth, Chairman, No. 8 East Sixty-fifth street.

Samuel A. Lewis, No. 314 West Fourteenth street.

Timothy Brennan, No. 94 White street.

William E. Duryea, No. 126 East Twenty-sixth street.

William Wood, No. 4 West Eighteenth street.

Hooper C. Van Vorst, No. 10 West Forty-ninth street.

Nathaniel Sands, No. 220 East Seventeenth street.

Magnus Gross, No. 311 Third street.

Lorin Ingersoll, No. 105 East Twenty-first street.

Enoch L. Fancher, No. 141 Madison avenue.

Edward O. Jenkins, No. 137 West Forty-fourth street.

Nathaniel Jarvis, Jr., No. 124 West Twenty-third street.

Alexander S. Webb, No. 12 Lexington avenue.

Lawrence D. Kiernan, Secretary, No. 230 East Thirty-fifth street.

During the year the Board of Trustees held eleven meetings, duly convened, for the transaction of business.

### 2. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The Professorships in the College during the past year were the following :

1. A Professor of Philosophy.
2. A Professor of English Language and Literature.
3. A Professor of Latin Language and Literature.

4. A Professor of Greek Language and Literature.
5. A Professor of French Language and Literature.
6. A Professor of German Language and Literature.
7. A Professor of Spanish Language and Literature.
8. A Professor of History and Belles-Lettres.
9. A Professor of Mathematics.
10. A Professor of Mechanics, Astronomy and Engineering.
11. A Professor of Chemistry and Physics.
12. A Professor of Natural History, Physiology and Hygiene.
13. A Professor of Descriptive Geometry and Drawing.
14. A Professor of Methods of Teaching.

### 3. FACULTY AND OTHER OFFICERS.

The Faculty of the College consisted of the President and fourteen Professors; the other persons charged with the duty of giving instruction during the year were seventeen Tutors, three Fellows and one Special Instructor in Elocution.

The following list shows the names of all persons employed in the College during the year, and the salaries paid to each of them:

Alexander Stewart Webb, LL. D., President.....	\$4,750
Jean Roemer, LL. D, Vice-President, and Professor of French Language and Literature.....	4,250
Augustin José Morales, LL. D., Professor of Spanish Language and Literature.....	3,750
Gerardus Beekman Docharty, LL. D., Professor of Mathematics, and Secretary of the Faculty.....	3,750
Charles Edward Anthon, LL. D., Professor of History and Belles-Lettres .....	3,750
John Graeff Barton, LL. D., Professor of English Language and Literature .....	3,750
Robert Ogden Doremus, M. D., Professor of Chemistry and Physics .....	3,750
Herman J. A. Koerner, Ph. D., Professor of Descriptive Geometry and Drawing .....	3,750
Adolph Werner, M. S., Professor of German Language and Literature .....	3,750
John Christopher Draper, M. D., Professor of Natural History and Physiology .....	3,750
Alfred George Compton, A. M., Professor of Mechanics, Astronomy and Engineering .....	3,750

George Washington Huntsman, A. M., Professor of Philosophy.....	\$3,750
Charles G. Herbermann, Ph. D., Professor of Latin Language and Literature.....	3,750
Jesse A. Spencer, S. T. D., Professor of Greek Language and Literature .....	3,750
David B. Scott, A. M., Professor of Methods of Teaching..	3,750
David B. Scott, A. M., Principal of Introductory Department,	1,000
Benjamin Arad Sheldon, A. M., Tutor in Mathematics.....	2,500
Casimir Fabregon, A. M., Tutor in French.....	2,500
James Godwin, A. M., Tutor.....	2,500
Solomon Woolf, A. M., Tutor .....	2,500
James Knox, A. M., LL. B., Tutor.....	2,500
Fitzgerald Tisdall, A. M., Tutor.....	2,500
James Edward Morrison, A. M., LL. B., Tutor in History and Belles-Lettres .....	2,500
Charles Roberts, Jr., A. M., LL. B., Tutor.....	2,500
Ernest Fiston, A. M., Tutor in French .....	2,500
William Stratford, A. M., M. D., Ph. D., Tutor .....	2,500
William Stratford, A. M., M. D., Ph. D., Secretary to the President .....	500
Eustace Whipple Fisher, A. M., M. D., Tutor in English...	1,250
Edward Ellice Burnet, A. M., Tutor in English.....	2,500
John R. Sim, A. B., Tutor.....	1,200
William G. McGuckin, A. B., Tutor .....	1,200
Robert Abbe, A. B., Tutor .....	1,200
Charles A. Walworth, LL. B., Tutor in Book-keeping, Phonography, etc.....	2,500
Hugo R. Hutten, Tutor in German .....	2,500
J. Hamden Dougherty, A. B., Fellow .....	500
Charles E. Lydecker, B. S., Fellow.....	500
Martyn Summerbell, A. B., Fellow .....	500
Joseph E. Frobisher, Special Instructor in Elocution.....	2,000
Asa W. Wilkinson, Assistant to the Professor in Chemistry,	2,500
John T. Cuming, Librarian and Registrar.....	3,750
Francis A. Reicard, Assistant in the Repository.....	1,000
Charles Wolfe, College Mechanician.....	1,500
John Bonney, Janitor .....	1,200
Dennis Leavy, Assistant Janitor .....	700
Laboratory Boy .....	240

## 4. NUMBER OF STUDENTS.

The whole number of students, undergraduates in said College, during said year, was :

Whole number in the Introductory Department.....	538
Whole number in the four Collegiate classes.....	370
Left or dismissed from Introductory Department for various reasons.....	272
Left or dismissed from the four Collegiate classes for various reasons.....	127
Graduated June 27, 1872.....	<u>33</u>

During the collegiate year leave of absence was granted to seventeen students on the ground of ill health.

## 5. CLASSIFICATION OF STUDENTS FOR ENSUING YEAR.

1. In the Senior class.....	37
2. In the Junior class.....	54
3. In the Sophomore class.....	70
4. In the Freshman class.....	181
5. In the Introductory Department.....	538
Total.....	<u>880</u>

## 6. ACADEMIC DEGREES.

The following are the names of those who received academic degrees at the last Commencement :

*Bachelors of Arts.*

Jacob Abarbanell, Sheppard Banks, Arthur Beach, Samuel Jackson Beach, George Henry Blish, David Clark Cocks, Fred Harmon Comstock, John Henry Fruchtnicht, Samuel Greenbaum, Emanuel Hochheimer, Henry Loewenthal, James Eugene Malone, John Bach McMaster, Hamilton Victor Meeks, Leopold Putzel, William Otis Ruston, Adolphus Henry Stoiber, Seligman Joseph Strauss, Henry Lloyd Thornell, Henry Van Kleeck, Richard Van Santvoord, James Lawrence Woodward.

*Bachelors of Sciences.*

Jacob Abarbanell, Oscar Birnbaum, Harry Dodge Cooper, James Mackie Donald, Benjamin Joseph Falk, Jed Frye, Jr., John Cowan

Gulick, Emanuel Hochheimer, William Burdge Howe, Frank Keck, John Egmont Schermerhorn, David Solomon, Leopold Putzel, Eddy Shipley, Seligman Joseph Strauss, Henry Van Kleeck.

*Masters of Arts.*

Alphonse Anselm Jakobi, A. B. & B. S.; George Cowles Lay, Jr., A. B.; William Henry Clark, A. B.; Henry Orne Hiscox, A. B.

*Master of Sciences.*

Walter Howe, B. S.

*Certificates of Fellowship.*

John Hampden Dougherty, Charles Edward Lydecker.

7. COLLEGE TERMS AND SESSIONS.

There were two College Terms. The first term began on the third Wednesday of September, and ended on the 9th of February. The second term began on the 12th of February and ended on the 27th of June.

8. SUBJECT AND COURSE OF STUDIES.

There are two courses, Ancient and Modern, differing only in the languages studied. The following are the subjects studied in each year :

*Introductory Students.*

During the collegiate year, the introductory students who pursued the Ancient Course studied Harkness' Latin Grammar (through Syntax), and parts of four books of Cæsar's Commentaries, with several exercises in Latin Prose Composition, Docharty's Algebra and Geometry; Linear Drawing; Elementary Chemistry and Physics (by lectures); Natural History, Anatomy and Physiology; Barton's Outlines of Universal and English Grammar and English Prosody with Applications.

Those who pursued the Modern Course studied, instead of Latin, Vannier's Spelling and Pronunciation, Robertson's Grammar, and portions of Roemer's Polyglot and Elementary Readers.

The commercial students pursued French as above, or German through Ahn's Method, Part I; Penmanship, Book-keeping, Elementary Phonography, Commercial Arithmetic, Geometry and English, as above, for one term.

*Freshman Class.*

The studies of this class were Sallust's Catiline, Cicero's Oration for the Manilian Law, Latin Grammar, Prosody, and Versification; Greek Praxis and Grammar, and translations from the Jests of Hierocles, Dialogues of Lucian, and Æsop's Fables; Outlines of Universal History; Analytical Geometry, Surveying and Navigation; Descriptive Geometry, Shadows and Perspective; Anatomy, Physiology and Hygiene; Fowler's English Grammar and Tuckerman's American Literature.

The modern course students, instead of Latin and Greek, studied in French, French Grammar, and translations from Roemer's Second French Reader; a portion of them in Spanish, Spanish Grammar, and translations from Iriarte's Fables, and a portion of them in German, Glaubensklees Grammar and Reader.

*Sophomore Class.*

In this class, the studies were Virgil's Æneid and Livy; Xenophon's Anabasis and Memorabilia; Rhetoric; Outlines of Universal History; English Synonyms; English Literature; Differential and Integral Calculus; Physics, Drawing, Logic and Moral Science.

The modern course students, instead of Latin and Greek, studied in French, translations from French Reader, Moliere's Bourgeois Gentilhomme, Les Femmes Savantes, Racine's Esther, Erckmann-Chatrian's Conscrit, translations from English into French; a portion of them in Spanish, translations from Quintana, Moratin, and Ascargorta; and a portion in German, Glaubensklees Grammar and Reader.

*Junior Class.*

In this class, the studies were Tacitus and Horace's Odes, Homer's Iliad and Demosthenes' Orations, with Greek Prose Compositions, Intellectual Philosophy, Logic, Universal Literature, English Grammar and Literature, Analytical Mechanics, Acoustics, Optics, Physics and Zoölogy.

The students of the modern course, instead of Latin and Greek, studied in Spanish, Moratin's Comedies, Don Quixote, Spanish Grammar, and translations from English into Spanish.

*Senior Class.*

The students of the ancient course take either French, Spanish or German, as they may elect, during their Senior year, and study, in

addition, Thucydides, Plato, *Œdipus Tyrannus*, Butler's *Analogy*, *Metaphysics*, *Political Economy*, *Constitution of the United States*, *International Law*, *Spherical Astronomy*, *History of Universal Literature*, *Civil Engineering*, *Stereotomy*, *Chemistry* and *Lectures on Æsthetics*.

The students of the modern course, who chose Latin, studied Harkness' *Latin Grammar*, and selections from *Cæsar*, *Sallust*, *Cicero* and *Virgil*.

The students of the ancient course, who selected French, studied *Robertson's French Grammar*, and *Brown's First and Second French Readers*.

Those who chose Spanish, studied *Spanish Grammar and Reading*, *Don Quixote*, and *Moratin's Comedies*.

Those who chose German, studied *Whitney's Grammar*, *Whitney's Reader* and *Wallenstein*.

The students of the modern course studied *Oltrogge's Reader*, *Wallenstein*, and *Whitney's Grammar*.

#### 9. EXERCISES.

The students of the Collegiate classes have regular exercises in composition and oratory. The public exhibitions are four in number: the Junior exhibition, consisting of original orations by members of the Junior class; the prize speaking, consisting of declamations of selected pieces by three members of each of the three highest classes; the prize debate by members of the two Literary Societies; and the Commencement.

#### 10. EXAMINATIONS.

There are two examinations; one at the close of the first term, and the other at the close of the year. The examinations are partly oral and partly written.

#### 11. MODE OF INSTRUCTION.

Text-books are used in all departments except that of *Drawing and Fine Arts*, in which the instruction is by lectures and models. In most of the departments, lectures are delivered in addition to the lessons learnt from the books.

#### 12. DISCIPLINE.

Ordinary negligence and misbehavior are punished by demerit marks, which lower a student's standing in his class at the end of



the term. In some cases, students are reprimanded before the Faculty, suspended or dismissed.

13. STATUTES OR BY-LAWS.

A copy is transmitted with this report.

14. DESCRIPTION AND VALUE OF COLLEGE BUILDINGS.

The building devoted to the use of the classes of the College proper contains twenty recitation rooms, two lecture rooms, two drawing rooms, one chapel, one library, one laboratory, two offices for the President, apartments for the janitor, and several store rooms. The value of the building and grounds is estimated at \$150,000.

The building used by the Introductory Department contains eleven recitation rooms, an assembly room, a room and office for the Principal, and store rooms in the basement. The value of the building and furniture is \$40,000.

The Library contains 22,000 volumes of valuable and well-selected works; the estimated value is placed at about \$62,000.

The Repository contains 9,500 text-books. Estimated value, \$16,000.

*Laboratory.*

The Laboratory is provided with the necessary apparatus of glass and porcelain, and with such chemical preparations as may be required by the Professor having charge of the department.

The collection of apparatus illustrating the principles of mathematical, physical and mechanical science is estimated at about \$19,500, and the cabinet of Natural History at \$3,000.

The architectural models and casts from the antique used by the Drawing Department are estimated at \$3,000. The collection in this department is increasing by the addition of the Ollivier models in Descriptive Geometry, which are making under the supervision of the Professor in the College workshop.

*Summary of Estimated Values.*

Buildings and ground .....	\$190,000 00.
Library .....	60,000 00
Apparatus of all kinds.....	19,500 00
Cabinet of Natural History, Models, etc.....	3,000 00
Casts, Models, etc., in Art Department.....	3,000 00
Total.....	<u>\$275,500 00</u>

15. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

Holbrook Library Fund .....	\$5,000 00
Grosvenor Library Fund (see account No. 17) .....	30,000 00
Pell Medal Fund .....	500 00
Burr Medal Fund .....	500 00
Cromwell Medal Fund .....	500 00
Riggs Medal Fund .....	1,000 00
Ward Medal Fund (a mortgage for) .....	1,000 00
Kelly Medal Fund (bond for) .....	1,000 00
Clafin Medal Fund .....	1,250 00
	<hr/>
	\$40,750 00
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16. DEBTS.

Due on contract for erecting Introductory Department building .....	\$6,299 00
Due on contract for furniture for Introductory Department building .....	2,075 00
	<hr/>
	\$8,374 00
	<hr/>

The payment of this sum is provided for through the Board of Apportionment and Audit, created by act of 30th of January, 1872.

17. REVENUES AND EXPENDITURES.

*Revenues and Expenditures of the College of the City of New York, for the year ending the first day of July, 1872.*

RECEIPTS.

Balance on hand per last report .....	\$11,303 52
Deposits by the Comptroller with the Chamberlain to the credit of the Trustees for the purposes of the College.	
November 3, 1871 .....	\$17,176 84
February 28, 1872 .....	20,000 00
March 25, 1872 .....	20,000 00
June 11, 1872 .....	25,000 00
June 19, 1872 .....	25,000 00
	<hr/>
	107,176 84
	<hr/>
Total .....	\$118,480 36

Brought forward..... \$118,480 36

## PAYMENTS.

Furniture for new building on account of contract .....	\$2,500 00
Salaries of Faculty and employes.....	82,879 60
Scientific Apparatus, Chemicals, etc.....	219 94
Repairs of buildings, furniture, etc .....	294 10
Books and supplies.....	661 57
Incidentals, printing, Commencement expenses, fuel, gas, stationery, cleaning building, premium on insurance, etc ...	3,392 90

Total payments..... 89,948 11

Balance on hand with Chamberlain ..... \$28,532 25

*July 1st, 1872.*

*Receipts and Expenditures of the Grosvenor Fund for the year ending the first day of July, 1872.*

## RECEIPTS.

Balance on hand per last report.....	\$580 86
Interest on bonds and mortgages.....	1,026 83
Interest on bonds of the United States and the premium on gold interest .....	931 87
Interest on deposits in Trust Co. ....	41 58

Total receipts ..... \$2,581 14

## PAYMENTS.

Library books, sundry bills.....	2,235 99
Balance on hand this date.....	\$345 15

*July 1st, 1872.*

*Statement of the Grosvenor Fund, bequeathed by Seth Grosvenor, deceased, the interest on which is to be applied for the purchase of library books.*

Cash on deposit in Union Trust Co. ....	\$6,000 00
Bonds and mortgages on real estate in the city of New York, \$5,000 at seven per cent, \$5,000 at six per cent interest. ....	10,000 00
Bonds of the United States, five-twenties, interest six per cent in gold, semi-annually .....	14,000 00
Total .....	<u>\$30,000 00</u>

*July 1st, 1872.*

At a meeting of the Board of Trustees of the College of the City of New York, held September 18, 1872, it was ordered that the foregoing report be properly authenticated by the Chairman and Secretary of the Board, under the seal of the College, and transmitted to the Board of Regents of the University of the State of New York.

BERNARD SMYTH,

*Chairman.*

LAWRENCE D. KIERNAN,

*Secretary.*

## XXI. RUTGERS FEMALE COLLEGE, NEW YORK CITY.

The Trustees of Rutgers Female College, in the city of New York, present to the Board of Regents the following report, showing the condition, the work, and the progress of the said institution, during the collegiate year ending June 20th, 1872:

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

Under this head no very marked changes are to be noted since the last report, save that Prof. Upham's health having compelled him to withdraw from active duties of instruction, the department of Intellectual Philosophy was placed in charge of the President. It will be observed that the total numbers of both the Faculty and the students are less than they were, owing to the discontinuance of the Harlem branch of the College. On the resignation of the former President, the Board of Trustees found, upon investigation, that the branch was not remunerative; and in view of this fact, as well as of the difficulty of successfully carrying on a twofold division of the institution, they decided to discontinue it.

## 2. TRUSTEES AND FACULTY.

The following is a list of the Trustees of the College, with their respective places of residence:

Edwards Hall, M. D., Chairman, New York city.

Jeremiah Burns, Treasurer, New York city.

Isaac H. Hall, Secretary, New York city.

James B. Burgess, New York city.

William Bushnell, New York city.

H. M. Pierce, White Plains, N. Y.

Sidney Root, New York city.

Hamilton B. Robinson, New York city.

Frederick Waydell, New York city.

Jacob B. Tallman, New York city.

Rev. Lyman Cobb, Yonkers, N. Y.

George W. Samson, D. D., President, New York city.

The annual meeting of the Board was held on the 8th day of January, 1872, on which occasion the following members were pre-

sent, viz.: Messrs. Burgess, Burns, Bushnell, E. Hall, I. H. Hall, Pierce, Robinson, Samson, and Tallman.

Other meetings were held during the year on the following days, viz.: June 20th, July 7th and 14th, August 2d, 16th and 28th, September 6th and 22d, in 1871, and June 6th, 1872.

The Faculty of the institution, including all persons charged with the duty of giving public instruction therein during the said year, was composed of the following individuals:

George W. Samson, D. D., President, and Professor of Mental and Moral Philosophy and of *Æsthetics*.

Daniel S. Martin, A. M., Professor of Geology and Natural History (and in temporary charge of instruction in Chemistry).

Thomas S. Samson, A. M., Instructor in Latin.

T. E. Blakely, A. M., Lecturer on Chemistry and Physics.

Hiram Carson, A. M., Lecturer and Instructor in Elocution.

Julia B. Ackley, Teacher of Mathematics and of Physiology.

Blandina Conant, Teacher of History, English Literature and Rhetoric.

Helen S. Bergmann, Teacher of the German Language and Instrumental Music.

Françoise Lecaille, Teacher of the French Language.

Mary H. Baldwin, Teacher of Elocution and Penmanship.

Cornelia W. Conant, Teacher of Drawing and Painting.

Olivia J. Burns, Assistant in French.

Henrietta B. Church, in charge of the Academic Department.

Mary Saterie, in charge of the Preparatory Department.

### 3. NUMBER OF STUDENTS.

The whole number of undergraduate students in the College, during the year covered by this report, was seventy; eight of this number left during the course of the year, three on account of removal from the city, two from failure to maintain standing in their studies, and three on account of health. In addition to these, there were three special or post-graduate students and forty-nine academic and elementary pupils in the two lower schools connected with the College, making a total of 122 scholars in attendance upon the institution as a whole.

The number of graduates at the Annual Commencement, held on the 20th of June, 1872, was thirteen.

The whole number of graduates, under the present charter of the institution as a College, is sixty-seven.

4. CLASSIFICATION OF STUDENTS.

The students who were undergraduates in the College during the year were classified as follows :

Seniors .....	16	
Juniors.....	16	
Sophomores.....	15	
Novians .....	12	
	59	
Intermediate class .....	11	70
Special and post-graduate students .....	3	
		73

There were also quite a number of students, both from the College classes and the lower schools, who practiced Drawing during the year in the art gallery. Two of the Senior class, and one lady not otherwise connected with the institution, worked in oil painting.

5. COMMENCEMENT EXERCISES.

Annexed is a copy of the scheme of exercises at the last Commencement :

RUTGERS FEMALE COLLEGE, COMMENCEMENT,  
*June 20th, 1872, at 2 P. M.*

STEINWAY HALL.  
ORDER OF EXERCISES.

ANTHEM—"How beautiful upon the Mountains," .....	Smith.
Graduating Class.	
PRAYER.....	Rev. John Hall, D. D.
INSTRUMENTAL QUARTETTE—"Caliph von Bagdad," .....	Boieldieu.
Misses Ayres, Dodge, Webster and Crouthers.	
SALUTATORY ADDRESS .....	Sarah M. Wilbur, Westerly, R. I.
ESSAY—"Simple Pleasures," .....	Sarah A. Bell, Mott Haven, N. Y.
ESSAY—"Interpreters," .....	Hattie L. Webster, New York city.
INSTRUMENTAL SOLO—"Tarentelle," .....	Mills.
Miss Marie du Puget.	
ESSAY—"The Effects of Natural Scenery on the Human Mind,"	
Mary M. Bell, Mott Haven, N. Y.	
ESSAY—"Sculpture," .....	Alice E. Stevens, New York city.
ESSAY—"Authors of their own Destiny," .....	Helen J. Aitkin, Elizabeth, N. J.
VOCAL SOLO—"Das Erste Vielchen," .....	Mendelssohn.
Miss Ella T. Holden.	
ESSAY—"Concentration of Mind," .....	Annie S. Crouthers, Astoria, L. I.

ESSAY—"The Progress of Geological Science," ... Sarah M. Wilbur, Westerly, R. I.

INSTRUMENTAL DUO—"Triumphal March," ..... *Goria*.

Misses Aitkin and du Puget.

ESSAY—"Appearances," ..... Minnie A. Ayres, New York city.

ESSAY—"Slave or Saxon," ..... Grace L. Stevens, New York city.

INSTRUMENTAL QUARTETTE—"Invitation to Galop," ..... *F. Bendel*.

Misses Wilbur, Hall, Ayres and M. Bell.

FRENCH ESSAY—"Ce qui coute le plus cher aux hommes,"

Hattie L. Webster, New York city.

ESSAY—"Woman in Literature," ..... Charlotte C. Hall, New York city.

VOCAL SOLO—"Non Torno," ..... *Tito Muttei*.

Miss Grace L. Stevens.

ESSAY—"The Power of Character," ..... Marie W. du Puget, Hudson City, N. J.

LATIN ESSAY—"Marius amid the Ruins of Carthage," Mary F. Dodge, Auburn, N. Y.

INSTRUMENTAL SOLO—"Champagne," ..... *Vosa*.

Miss Helen J. Aitkin.

ESSAY—"Weapons of Civilization," ..... Ella T. Holden, New York city.

VALEDICTORY ADDRESSES..... Charlotte C. Hall, New York city.

INSTRUMENTAL QUARTETTE—"Poet and Peasant," ..... *Von Suppe*.

Misses G. Stevens, Dodge, Webster and Crouthers.

*Baccalaureate Degrees will be conferred upon the following members of the Graduating Class:*

HELEN JAKUES AITKIN.

MINNIE ADELAIDE AYRES.

MARY MIDDLETON BELL.

SARAH ARMSTRONG BELL.

SARAH ANNIE CROUTHERS.

MARY FLAGLER DODGE.

CHARLOTTE CHAMBERS HALL.

ELLA THAWER HOLDEN.

ALICE EMMONS STEVENS.

GRACE LILLIAN STEVENS.

HATTIE LUELLE WEBSTER.

SARAH MANN WILBUR.

MARIE WHITE DU PUGET.

The Testimonial for a Partial course will be conferred upon Giulietta Molini.

Farewell Song of the Graduating Class.

BENEDICTION.

The degrees conferred were as follows:

A. B. in course. Helen J. Aitkin, Mary F. Dodge, Marie W. du Puget, Charlotte C. Hall, Ella T. Holden, Alice E. Stevens, Grace L. Stevens, Hattie L. Webster, Sarah M. Wilbur.

L. B. (Litterarum Baccalauria) in course. Minnie A. Ayres, Mary M. Bell, Sarah A. Bell, Annie S. Crouthers.

No Honorary Degrees were bestowed this year. One student was graduated on a Partial course certificate.

## 6. COLLEGE TERMS OR SESSIONS.

The terms or sessions for study, during the said year, were two. The first term began on the 26th of September, 1871, and ended on



the 13th of February, 1872; the second term began on the last mentioned day, and ended on the 20th of June, 1872, the day of the Annual Commencement. The winter vacation extended from December 21st to January 2d, inclusive.

#### 7. SUBJECTS OR COURSE OF STUDY.

The course of instruction was as follows :

In the Novian class, all the members studied Natural Philosophy throughout the year, with the President, reciting twice a week. The text-book used was Rolfe and Gillett (Cambridge Physics), edition of 1871; and the class went through Parts I and II in the first term, and finished the book in the second term.

English Literature was pursued by all the class three times a week, through both terms, with Miss Conant. The work used was Shaw's Outlines, from which selected portions were studied covering the entire range of the volume.

Rhetoric was studied in a similar manner, from Parker's Aids to English Composition. Recitations took place twice a week through the second term.

In Mathematics, eight students used Loomis' Geometry, with Mrs. Ackley, three times a week through the first term, and completed three books. In the second term they studied Loomis' Algebra, to Quadratics. This class was especially behindhand in Mathematics; this amount of study being now placed among the requirements for admission.

In French, nine students used Fasquelle's French Course, completing some forty chapters, and read about half the *Pour un Epingle* of J. T. de St. Germain. Recitations were held thrice a week through both terms.

In Latin, seven students finished Andrews' and Stoddard's Grammar and Reader, wrote the first ten exercises of Arnold's Latin Prose, and read from the first book of Cæsar's Gallic War. Recitations took place twice a week through both terms.

The work of the Sophomore class was as follows :

In Chemistry, the larger work of Rolfe and Gillett (Cambridge Course, fourth edition) was taken up by twelve students at the beginning of the first term, and finished early in the second. The whole book was thoroughly studied, with three recitations a week. A course of twelve experimental lectures was given, in addition to the informal illustrations of the class-room.

In English Literature, Shaw's Outlines were used by all the class three times a week through both terms. The work was nearly completed.

In Rhetoric, Parker's Aids were studied by all the class, through the second term, two recitations weekly; this, as well as the Literature, being in charge of Miss Conant. The work was not used as a whole, but the more important and difficult portions were selected for study.

In German, the whole class used Otto's Conversations-Grammar, studying 213 pages, and reading twenty-two pages of the lessons in the Appendix. Recitations took place three times a week, with Miss Bergmann, through both terms.

In French, twelve students recited to Mad. Lecaille three times a week through both terms. They studied about forty chapters of Fasquelle's French Course, and read some fifty pages of "Rosa," by Mad. E. de Presseusé.

In Latin, seven of the class completed Andrews' and Stoddard's Grammar, wrote the first fifteen exercises of Arnold's Latin Prose Composition, and read the first and second books of the *Æneid*, reciting twice a week through both sessions.

In Mathematics, ten students began Loomis' Geometry and recited twice a week through both terms, completing six books.

### *Junior Class.*

The studies of this class, in which examinations were held, were the following:

In the department of Literature, Schlegel's Lectures were studied with Miss Conant, by all the class, twice a week through both terms. The portion gone over comprised the chapters on Ancient Literature.

Rhetoric (University edition of Blair) was studied by ten of the class through the first term, two recitations weekly, going to about Lecture XXIII. In the second term, Kames' Elements replaced the rhetoric, and the class nearly completed the work.

In *Æsthetics*, Samson's History and Criticism of Art was used by all the class, with the President, recitations occurring twice a week through both terms. The amount of ground gone over comprised the first and second books (*Æsthetics* and *Drawing*). The class also attended the President's course of public lectures on the same subject during the second term.

In Natural Sciences, nine students used President Loomis' Ana-

tomy, Physiology and Hygiene, with Mrs. Ackley, thrice a week during the first term. In the second term this study was replaced by Comparative Physiology (Agassiz's and Gould's Principles of Zoölogy) three times a week, with the Professor of Natural History. This work was used as the basis of lectures quite largely, which were rendered more than usually important, and, indeed, absolutely indispensable from the great changes that have passed over many of the "principles of zoölogy" since this long-published volume was issued. The book was completed, with the omission of chapters X, XI and XII. The collections of the institution and of the Professor were used in constant illustration; and those of the American Museum of Natural History, in the Central Park, were visited and examined in connection with the study.

In Mathematics, ten students completed Loomis' Geometry in the first term, and Loomis' Algebra in the second, reciting to Mrs. Ackley thrice each week.

In Classics, eight students read the first book of Livy (Lincoln's), and wrote in Arnold's Latin Prose Composition every two weeks. They also completed the Grammar of Andrews and Stoddard. Recitations occurred twice a week through both terms.

The text-book in French was Noel and Chapsal's Grammaire et Exercices, which was studied throughout, and also Fasquelle's Course, of which fifty chapters were studied. The class read about half the Elisabeth of Mad. Cottin.

In German, thirteen students used Otto's Conversations-Grammar, and studied 124 pages, and read twenty-two pages of the Lessons in the Appendix. They recited twice a week through both terms with Miss Bergmann.

One member of the Junior Class, more advanced than the rest, took separate lessons in this language, studying sixty-four pages of Heise's Grammar (in German), and reading Schiller's Jungfrau von Orleans complete. Recitations thrice a week through both terms. Another student also took separate lessons weekly, and read the whole of the Jungfrau.

The studies of the Senior class, in which examinations were held, were the following:

In the department of Philosophy, the whole class studied with the President three times a week throughout the year. During the first term, they took up and completed Wayland's Moral Science. In the second term, Intellectual Philosophy was taught in a series of lectures

by the President, accompanied and illustrated by recitations from Henry's translation from the French of [name omitted].

In the department of Science, Dana's Text-book was studied by all the class, with the Professor of Geology, three times a week through the first term and the greater part of the second. The means of illustration employed comprised the cabinets of the College, of the Professor, and of the School of Mines of Columbia College, to which last, as in previous years, free access was courteously given by the Faculty of that institution. The text-book was used as the basis of extended lectures and explanations, which covered the most important changes, discoveries and theories which enter into geological science.

In *Æsthetics*, all the class used Samson's History and Criticism of Art, thrice a week through both terms, with the President, completing books second to fifth, inclusive (Drawing, Sculpture, Architecture and Painting). In this study, besides the carefully selected illustrative collections of the President, which were constantly employed, the class had the advantage of visiting various remarkable paintings on exhibition in the city, and several prominent galleries, both public and private; among them the Belmont Collection, the Academy of Design, the Metropolitan Museum of Art, and the Abbott Collection of Egyptian Antiquities, belonging to the New York Historical Society. They also attended the President's public course of lectures on Art, during the second term.

In the department of Literature, under Miss Conant, Schlegel's Lectures (Bohn's edition) was studied by fourteen of the class, commencing and completing the part on Modern Literature. Recitations occurred twice a week through the first term and the greater part of the second.

In Mathematics, fifteen students took Loomis' Trigonometry and Applications, with Mrs. Ackley, completing it with the first term. In the second term, Loomis' Astronomy was begun and studied through about one-third of the book. Recitations in both these branches were heard thrice a week.

In modern languages, all the class took up the study of Italian, using Foresti's Course and Graglia's Grammar, with the President. This language is deemed important in connection with the study of art, as being so intimately connected with the history and literature of that subject as to render some degree of acquaintance with it, even though slight, highly desirable. The class recited twice a week

through the greater part of both terms, and went through about half of the above mentioned works.

Seven students pursued the French language three times a week through both terms, reading the *Athalie* and *Esther* of Racine, and ten of the most difficult chapters of Noel and Chapsal's (larger) *Grammaire et Exercises*.

In Classics, the *Ars Poetica* of Horace (Lincoln's edition) was read in full by five students, with the President. Recitations were held once a week through both terms. Three other members of the class, less advanced, read with Mr. Samson from the first book of the *Æneid*.

One student, more advanced in classics, took lessons in German during the second term, studying seventy-five pages of Otto's *Conversations-Grammar* and reciting twice a week.

#### 8. EXERCISES.

All the classes were required to write English compositions once every two weeks. Latin Prose Composition (Arnold's Exercises) was required weekly in the Novian, Sophomore and Junior classes, of all the classical students. Conversation in French was required during three hours of each day, and in German during two hours, from the members of the higher classes. All Compositions and Exercises are subjected to criticism and correction by those members of the Faculty in whose departments they fall. Practice in Elocution was also made a part of the regular instruction, weekly in the Junior class and twice a week in the two lower, under Miss Baldwin.

#### 9. EXHIBITION.

Besides the regular exercises of Commencement, the Junior class hold their exhibition, conformably to College usage, in the spring, about Easter. The Junior exhibition of 1872 took place April 12th, in the Central Baptist Church on West Forty-second street. A programme of the occasion is annexed here.

Another less prominent exhibition has been introduced since the opening of the present year. It is conducted by members of the two lower classes of the College, and is held at the close of the fall session, immediately before Christmas. A similar occasion took place last year, only that it was conducted by the Senior class. It is deemed better, however, to relieve the overtaxed Senior year at this point, and to begin the practice of such public exercises at an earlier stage in the course, by assigning this occasion to the Sophomore and Novian classes.

No prizes, contests or competitive examinations are introduced into the course. The reasons for their exclusion have been stated in previous reports, and no cause has been seen to lead to any change of opinion or usage.

#### 10. EXAMINATIONS.

Examinations were held in all the regular studies described above ; no student being allowed to retain standing in her class, except upon successful examination. The oral method is mainly employed, each student being required to draw slips whereon topics are noted, and to state, after time for reflection, the information obtained from the text-book and from the teacher. Examinations are held semi-annually, one series occurring at the middle of the College year, at the end of the first term, and another at the close of the year, prior to Commencement.

#### 11. MODE OF INSTRUCTION.

All the branches above described were taught by means of text-books, with the exception of Mental Philosophy ; in this department, the students were required to note down full analyses of the lectures, and to state their own as well as the teacher's impressions. In the departments of Rhetoric, Literature and History, of Chemistry and Physics, of Geology and Natural History, and in the arts of Drawing, Sculpture, Architecture and Painting, illustrative lectures and criticisms are mingled with or added to the text-book instruction ; and with the substance of these, the students are expected to show themselves acquainted at examination.

Distinct courses of lectures were also given on the following subjects : On Chemistry and Electricity, twelve, to the Junior and Sophomore classes, by Professor T. E. Blakely ; and on Elocution, twelve, to the Senior class, by Professor Hiram Corson, late of Cornell University. Both these series of lectures were given in the second term.

#### 12. DISCIPLINE.

The discipline of the institution is entirely dependent on moral influences, the methods being the same as those described in previous reports, viz., the personal advice and direction of the President and Faculty, and also of parents or guardians. These means, used by the present President for twelve years with young men, and for two years

with young ladies, have never failed to effect the desired result, without a single instance in which expulsion has been necessary.

13. GRATUITOUS AID.

The College has no provision for the aid or support of students. Each individual case has to be made the subject of special arrangement with the authorities of the institution. Earnest and deserving students, however, and usually the daughters of clergymen, are dealt with as liberally as the circumstances of the College will permit.

14. STATUTES OR BY-LAWS.

There are no fixed regulations, but the conduct of affairs is carried on under such arrangements as the Trustees and Faculty from time to time decide upon.

15, 16. BUILDINGS, ETC.

The Regents have been made aware, by the last annual report, that under the policy pursued in the earlier years of the College, the results of which proved to be so injudicious, the entire real as well as nearly all the personal property of the institution passed into the hands of mortgagees and other creditors; and the Trustees regret that they have not been able thus far to make any considerable progress—although they occupy the buildings as lessees—toward the repurchase of the same.

One feature of the policy referred to above consisted in the issuing of a large number of scholarships, for which the money was received at the time, thus forestalling the income of the College, and leaving the Trustees but two alternatives: the one the dishonoring of these seemingly just claims; the other the striving, even under such adverse circumstances, to give to the holders, who had bought them in good faith, all that they hoped for, although there was no fund from which to draw for that purpose.

To such an extent was this feature of the above policy adopted, that fully one-half of the pupils in the College were there under such a provision, thereby canceling between \$7,000 and \$8,000 of the bills for tuition, which amount, if it could have been received, would not only have saved the Trustees from any deficit, but have left a respectable cash balance.

17. DEBTS.

Floating debt (as recognized) . . . . .	\$7,800 00
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18. REVENUE.

Receipts during the year from tuition, stages, etc. ....	\$15,290
Lectures.....	254
Rent of chapel .....	289
Total .....	<u>\$15,835</u>

19. EXPENDITURE.

Salaries paid professors and teachers .....	\$9,650 00
Rent.....	8,000 00
Fuel and other expenses .....	4,485 70
	<u>22,135 7</u>
Deficit for the year .....	<u><u>\$6,300 7</u></u>

20. TABULAR STATEMENT.

Number of departments or courses of study.....	
Number of professors } in the College proper .....	1
Number of tutors ... }	
Number of collegiate students .....	<u>5</u>

Number of graduates in 1872:

Classical course.....	
Literary course .....	
Partial .....	<u>1</u>

Total number of graduates since the degree of A. B. was first conferred, 1870:

A. B. ....	2
L. B.....	4
	<u>3</u>

Since the College charter was given, 1867..... 6

Revenue for the last collegiate year .....	\$15,835 00
Expenditure for the last collegiate year .....	22,135 70
Amount of debts (floating) .....	<u><u>7,800 00</u></u>



## 21. CLOSE OF REPORT.

This report, though ready for presentation at the annual meeting of the Board, on the second Monday of January, was, by some inadvertence, omitted; but at an adjourned meeting of the Board, on the third Monday of January, 1873, this report was presented, and, by a unanimous vote, ordered to be attested by the signatures of the proper officers, to wit, the President and Secretary, who are also thereby designated as two Trustees to sign the same, and by the Treasurer's signature, and by affixing the corporate seal of the College.

Attest :	EDWARDS HALL, <i>President,</i>
[L. s.]	ISAAC H. HALL, <i>Secretary,</i>
	<i>Two designated Trustees.</i>
	JEREMIAH BURNS, <i>Treasurer.</i>

## XXII. WELLS COLLEGE, AURORA, CAYUGA COUNTY, N. Y.

*To the Regents of the University of the State of New York :*

The Trustees of Wells College, in compliance with the requisition of the Regents of the University, submit the following report for the last collegiate year, ending on the 20th day of July, 1871, being the day of the annual Commencement, containing a just and true statement of facts, showing the progress and condition of said College, during and at the close of said year, in respect to the several subject-matters following, viz. :

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

\* \* \* \* \*

### 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

#### *Trustees.*

Henry Wells, Esq., Aurora.  
 Charles H. Wells, Esq., New York.  
 James H. Wells, Esq., New York.  
 Hon. E. B. Morgan, Aurora.  
 Tallmadge Delafield, Esq., Aurora.  
 William H. Bogart, Esq., Aurora.  
 Hon. Lewis H. Morgan, Rochester.  
 Hon. Frederick W. Seward, Auburn.  
 Hon. Nathan K. Hall, Buffalo.  
 Rev. Jonathan B. Condit, D. D., Auburn.  
 Hon. Charles J. Folger, Geneva.  
 Alexander Holland, Esq., New York.  
 John Scott Boyd, Esq., New York.  
 Hon. Charles B. Sedgwick, Syracuse.  
 Henry Foster, M. D., Clifton Springs.  
 Rev. S. Irenæus Prime, D. D., New York.  
 Henry Morgan, Esq., Aurora.

#### *Faculty.*

Rev. S. Irenæus Prime, D. D., then President.  
 Mary M. Carter, Vice-President and Lady Principal, Elocution.  
 Miss Adelaide Corwin, Mathematics.

Miss Jane E. Johnson, Mental, Moral and Physical Sciences.

Miss Margaret J. Hagen, Latin and Composition.

Miss Marian F. Wetmore, English Literature and English Language.

Mdlle. Marie J. Décent, French Language and Literature.

Mdlle. E. Prestat, French Language and Literature.

Prof. W. Havemann, Instrumental Music.

Franlein Emma Cohn, Vocal Music and German Language.

Miss E. Baldwin, Vocal Music.

Miss L. A. Gordon, Drawing and Painting.

The other College officers were Secretary, Steward, Housekeeper and Janitor, assisted by sixteen servants.

The last annual meeting of the Board was held on the 19th day of June, 1872, at which the following Trustees were present, viz.: Henry Wells, Esq., Charles H. Wells, James H. Wells, Rev. S. Irenæus Prime, D. D., Hon. E. B. Morgan, Tallmadge Delafield, Lewis H. Morgan, Henry Morgan and W. H. Bogart.

3. NUMBER OF STUDENTS.

The whole number of students during the year was sixty-one; number of students in College classes was forty-eight; six were graduated at the Commencement in June. There were also special and preparatory students, thirteen, making the above total of sixty-one.

4. CLASSIFICATION OF STUDENTS.

Seniors.....	7
Juniors .....	6
Sophomores.....	11
Novians .....	24
<hr/>	
Total in College classes.....	48
Students pursuing special courses .....	13
<hr/>	
Total .....	61
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Of the above there were, at the same time, pupils in Music:

Piano .....	27
Singing .....	14
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Total .....	41
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Pupils in Painting.....	4
Pupils in Drawing .....	4
	<hr/>
Total .....	8
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#### 5. ACADEMIC DEGREES.

The degrees conferred were: M. A., Mistress of Art, five; M. P., Mistress of Philosophy, one.

#### 6. COLLEGIATE YEAR.

The collegiate year was one continuous session of forty weeks. It began September 13, 1871, and ended June 20th, 1872. A recess of two weeks was held at the Christmas holidays.

#### 7. COURSE OF STUDY.

The studies pursued by the several classes during said year, with the text-books, extent and time of each, were as follows:

##### *Preparatory Classes.*

Reuck's Arithmetic; Quackenbos' United States History; Pier-son's Questions in Geography, with globes and maps; Pinneo's English Grammar; Keetel's Oral French Method; Principia Latina, Part 1st.

##### *Novian Year.*

Latin, two terms; Andrews and Stoddard's Grammar, reviewed to Prosody; Principia Latina, Part 2d; Viri Romæ; Cæsar; Robin-son's Algebra, two terms entire; French, two terms; Fasquelle, to 30th lesson; Pour une Epingle; Sous la Neige; Williams' English into French, forty pages. Besides daily recitation from text-books, there were also daily classes in French conversation. Warren's Physical Geography, entire, two terms, three recitations weekly; Willson's Ancient History, complete, two terms, twice a week; Alden's Self Culture, one-half term.

##### *Sophomore Year.*

Davies' Legendre, nine books, two terms; Latin, two terms; Andrews and Stoddard's Grammar, Prosody; Virgil, one book, with rules of Prosody from grammar; Cicero, four orations, with weekly exercises in Latin Prose Composition; French, two terms; Fasquelle's Grammar, continued; Philosophe Sous les Toits; Williams' English into French, continued; Howard's Aids to Composition, weekly;

Daily Conversation lessons; Steele's Natural Philosophy, complete, one term, with experiments; Bain's Rhetoric, complete, two terms, three recitations weekly; Willson's Mediæval History, two recitations each week, two terms; Tenney's Zoölogy, 300 pages, one term, two recitations weekly, with lectures by Professor; Gray's Botany, entire, one term, three recitations weekly, with analysis of plants; Physiology, one term, lectures weekly; examination on lectures.

### *Junior Year.*

Davies' Plane and Spherical Trigonometry, entire, one term; Latin, two terms; Cicero, four orations; Livy, selections from first book; weekly exercise in Latin Prose; French, two terms; Fasquelle's Grammar finished and reviewed; Williams' English into French, continued; Howard's Aids to Composition, weekly; Daily Conversation classes; Steele's Astronomy, one term, completed; English History, entire, one term, three times a week; Shaw's English Literature, complete, two terms, twice a week; Steele's Chemistry, entire, one term, with experiments; Dana's Geology, entire, one term; Alden's Science of Government, complete, one term.

### *Senior Year.*

French, Poitevin's Grammar; L'Allernagne; Williams' English into French; Howard's Aids to Composition, weekly; daily Conversation classes; Upham's Mental Philosophy, complete, one term; Alden's Christian Ethics, entire, one term; Guizot's History of Civilization, with lectures on Church History, complete, one term; Kames' Elements of Criticism, one term; McIlvaine's Evidences of Christianity, complete, one term.

The above list includes studies of both Classical and English courses. Students were allowed to choose the studies of either course, subject to the approval of the Faculty.

### 8. EXERCISES.

In elocution, students were drilled thoroughly in chest exercise and articulation, modulation of the voice and expression, with most satisfactory results. A daily drill of English, including punctuation and composition, was required of all the students; also, daily exercise in penmanship; an original essay was also required from every student every second week. The vocal teacher gave lessons to all the students twice a week in the elements of music and choral singing.

## 9. EXHIBITIONS AND PRIZE CONTESTS.

December 12th was celebrated as an annual College festival, in honor of the founder. The literary entertainment comprised a song of welcome, music, salutatory address from one of the students, and an address from Hon. Charles B. Sedgwick, followed by a reception and collation. June 19th, the Literary Society gave a public entertainment, consisting of semi-dramatic recitations, readings and music, both vocal and instrumental. June 17th, a soiree was given by the Musical Department; June 18th, Class day, and June 20th, Commencement day. No prize exhibitions were held.

## 10. EXAMINATIONS.

Examinations for admission were held at the opening of the term, and also whenever a student presented herself for admission. Written examinations were held twice during the year. No public class examinations were made.

## 11. MODE OF INSTRUCTION.

Recitations from text-books and lectures were combined in the several departments of instruction. Mathematics were taught, both orally and from text-books, in such a manner as to secure the most thorough mental discipline. Latin and modern languages were taught both from text-books and oral and written exercises. The inculcation of the French language was assisted by daily conversation classes. Rhetoric was taught from text-books and frequent exercises and by themes and epistolary composition. Elocution was taught orally and by means of exercises from practical authors and selections from the best dramatists. English literature was taught from text-books, with copious lectures. In Natural History, instruction was given by means of lectures, diagrams and specimens and by field exercises, as well as by text-books. In Chemistry and Natural Philosophy, lectures, with full experiments, were given in connection with text-books. Physiology was taught mainly by lectures, pupils taking copious notes and being examined therefrom.

## 12. DISCIPLINE.

It was the habitual endeavor of the members of the Faculty to instill in the minds of students that self-respect which would inevitably lead them to respect the wishes and feelings of others. A full record was kept by the students of any violations of the general rule

of lady-like deportment, and a semi-annual report of the same was submitted to their parents and guardians.

### 13. GRATUITOUS AID.

No general arrangements were made by which students were gratuitously received.

### 14. STATUTES OR BY-LAWS.

By-law No. 1. The officers of the College shall be a President of the College, a lady Principal, who shall be *ex officio* Vice-President of the College, and such professors as the executive department, hereafter named, shall designate.

2. There shall be an executive department of the College, which shall consist of the President of the Board of Trustees, the President of the College, and the lady Principal. They shall have the power to appoint, temporarily, the professors of the College, and to report such employment and appointment to the Trustees, and, if approved, they shall be appointed; and they shall have power to suspend all or any of the professors, whenever, in their judgment, it shall be necessary, and such suspension shall be reported to the Board of Trustees at its next meeting, and, if approved by them, such professor shall be removed. All appointments or removals of other officials or employes, engaged in the daily service of the College, shall be made by the President of the Board of Trustees and by the lady Principal.

3. The executive committee shall hold a meeting at the College on the first Tuesday of each month during the period of tuition, for the transaction of any business which may be laid before them by the executive department of the College.

4. The Board of Trustees shall, as occasion requires, appoint committees from its own body, whose duty it shall be to visit the institution as often as they may deem it necessary, attend its examinations, and report to the board if required. The Board, at their discretion, shall also appoint other boards of examiners, of persons eminent for their literary or scientific attainments, not connected with the institution, who shall be invited to attend such public examinations as shall be held at the close of terms, and on such other occasions as the board may conclude that their services are required.

5. The next Commencement of the College shall be held on the second Wednesday in July, and the collegiate year following shall

begin on the second Wednesday in September; and there shall be two weeks' vacation in winter, commencing three days before Christmas; and three weeks' vacation in spring, commencing about the middle of April.

6. The rates of tuition of the pupils admitted to this institution shall continue to be the same as heretofore agreed upon, and are to be found in the published catalogue, and no diminution or abatement shall take place from these rates without the consent of a majority of the board.

7. Pupils attending this institution are required to reside in the institution, with the exception that pupils whose parents are permanent residents of the village of Aurora will be received as day pupils, at such rates as may be determined by the executive department of the College.

8. These by-laws shall not be altered or amended without the consent of a majority of the Board of Trustees.

#### 15. DESCRIPTION AND VALUE OF COLLEGE PROPERTY.

A Cabinet, embracing mineral, geological, botanical and zoölogical specimens, has been added to the College during the year; the cases for which were contributed by Hon. Wm. G. Fargo. Installments of specimens are constantly arriving through the coöperation of the employes of Wells, Fargo & Co.

Cost value of edifice, including building for gas, water-

works and ice-house.....	\$152,500 00
Grounds (twenty-two and one-half acres).....	16,500 00
Value of library.....	2,500,00
Value of apparatus ....	2,500,00
Furniture and fixtures.....	21,220 00
Musical instruments.....	4,074 00

Total .....	<u>\$199,294 00</u>
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#### 16. DEBTS.

None.

#### 17. REVENUE.

Amount charged for board and tuition, which has been

collected or is considered collectible.....	<u>\$30,180 28</u>
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## 18. EXPENDITURES.

Salaries .....	\$6,640 00
Repairs of College property .....	285 87
Fuel and all other incidental expenses .....	19,239 57
Debt of last year .....	3,000 00
Balance on hand .....	1,014 84
Total .....	<u>\$30,180 28</u>

## 19. PRICES FOR TUITION.

Prices for tuition in collegiate branches, whether in the regular or special course, and board, including furnished room, with light, heat and ordinary washing, \$450 per year of forty weeks. To those pursuing extra collegiate branches, an additional charge was made as follows: For instruction on the organ or piano, or in singing, at the rate of \$80 per year; Painting, \$80; Drawing, \$40; German, \$40 and Italian, \$40. For those not pursuing extra collegiate branches, \$500 for the College year, including board and tuition, the cost of text-books, stationery, drawing materials, music, pew-rent, etc., would be a liberal average.

The foregoing report is respectfully submitted to the Regents by the undersigned.

HENRY WELLS,  
*President of the Board of Trustees.*

T. DELAFIELD,  
*Treasurer.*

M. M. CARTER,  
*Vice-President of the College.*

## V. UNIVERSITY OF THE CITY OF NEW YORK, NEW YORK CITY.

[See reference to this report on page 72.]

The Council of the University of the City of New York, in compliance with a requisition of the Regents of the University, submit the following report for the last collegiate year, ending on the 17th day of September, 1872, containing a just and true statement of facts, showing the progress and condition of said University during and at the close of said year, in respect to the several subject-matters following, viz.:

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in said University during said year, as established by the Council, were the following:

I, II. *In the Department of Arts and the Department of Science.*

1. The Johnston-Professorship of the Latin Language and Literature.

2. The Loring Andrews-Professorship of the Greek Language and Literature.

3. The John Cleve Green-Professorship of Mathematics and their applications.

4. The Sarah Andrews-Professorship of the Evidences of Revealed Religion and Evangelical Theology.

5. The George Griswold-Professorship of Political Science.

6. The Sarah Andrews-Professorship of Logic and Moral and Intellectual Philosophy.

Each of the foregoing has an endowment of \$25,000.

7. Chemistry and Natural History.

8. Physiology and Analytical Chemistry.

9. Geology.

10. Civil Engineering.

11. Mechanical and Architectural Drawing.

12. Arts of Design.

13. Italian Language and Literature.

14. French and German Languages and Literatures.

15. Spanish Language and Literature.

There were also in these Departments adjunct Professorships of Mathematics and of Chemistry and Natural History.

III. The Department of Medicine makes a separate report, as required by the Regents.

IV. In the Department of Law, the course was conducted by a President and four Professors.

## 2. COUNCIL AND SEVERAL FACULTIES.

The following is a list of the members of the Council of the University, all of whom reside in the city of New York:

### *Officers of the Council.*

John C. Green, President.

John Taylor Johnston, Vice-President.

William R. Martin, Secretary.

William A. Wheelock, Treasurer.

Howard Crosby, D. D., LL. D., Chancellor.

### *Members of the Council.*

#### *Class of 1868-72.*

Hon. William B. Maclay.

John Taylor Johnston.

Thomas De Witt, D. D.

James Suydam,\*

Isaac Ferris, D. D., LL. D.

George Griswold.

Thomas C. Chardavoyne.

Henry Van Schaick.

#### *Class of 1869-73.*

Charles Butler.

William M. Vermilye.

Adam Norrie.

William Allen Butler.

James K. Campbell, D. D.

Morris K. Jesup.

Aaron J. Vanderpoel.

William A. Wheelock.

#### *Class of 1870-74.*

John C. Green.

E. P. Rogers, D. D.

Howard Crosby, D. D., LL. D.

John E. Parsons.

William H. Neilson.

Hon. A. Oakey Hall.

J. W. C. Leveridge.

Thomas C. Doremus.

#### *Class of 1871-75.*

Mancius S. Hutton, D. D.

Robert L. Kennedy.

William E. Dodge.

Loring Andrews.

William R. Martin.

George H. Moore.

Augustus F. Smith.

\* Died 7th October, 1872.

The last annual meeting of the Council was held on the 7th day of December, 1871, at which the following members were present:

John Taylor Johnston, Vice-President; Howard Crosby, Chancellor; William R. Martin, Secretary; E. P. Rogers, D. D.; Mancius S. Hutton, D. D.; Charles Butler, J. W. C. Leveridge, William A. Wheelock, Augustus F. Smith, George H. Moore, William Allen Butler, Morris K. Jessup, Thomas C. Doremus, William H. Neilson.

Other meetings were held during the year on the following days: On 5th October, 1871, and on 1st February, 4th April, 16th May and 6th June, 1872.

The Faculties of the University, including all persons charged with the duty of giving instruction therein during said year, consisted of the Chancellor and thirty-one Professors.

The other officers or servants of the University, charged with duties therein other than those of public instruction during said year, were a Janitor and an Assistant Janitor.

The names of the several persons holding offices or places in the University during said year, with the offices or places held by them respectively, and the salaries or annual compensation for official services allowed to each of them, were as follows:

*I, II. In the Department of Arts and the Department of Science.*

Howard Crosby, D. D., LL. D., Chancellor, no salary.

Isaac Ferris, D. D., LL. D., Emeritus Chancellor, \$3,000.

E. A. Johnson, LL. D., Johnston-Professor of the Latin Language and Literature, \$3,500.

John W. Draper, M. D., LL. D., Professor of Chemistry and Natural History, \$3,500.

Benjamin N. Martin, D. D., L. H. D., Sarah Andrews-Professor of Logic and Intellectual and Moral Science, \$3,500.

Henry M. Baird, Ph. D., Loring Andrews-Professor of Greek Language and Literature, \$3,500.

George W. Coakley, LL. D., John Cleve Green-Professor of Mathematics, Natural Philosophy and Astronomy, \$3,500.

Richard H. Bull, A. M., Professor of Civil Engineering and adjunct Professor of Mathematics, \$2,000.

Henry Draper, M. D., adjunct Professor of Chemistry and Natural History, \$2,000.

E. H. Gillett, D. D., George Griswold-Professor of Political Science, \$1,800.

John J. Stevenson, Ph. D., Professor of Geology, \$900.

Joseph A. Saxton, A. M., Professor of Mechanical and Architectural Drawing, \$1,200.

Charles Carroll, A. M., Professor of the French and German Languages and Literatures, \$1,500.

Vicenzo Botta, Ph. D., Professor of the Italian Language and Literature, fees.

Luis F. Mantilla, A. M., Professor of the Spanish Language and Literature, fees.

Alexander Meyrowitz, A. M., Professor of the Hebrew Language and Literature, fees.

\* Samuel F. B. Morse, LL. D., Professor of the Literature of the Arts of Design, fees.

T. Addison Richards, N. A., Professor of the Arts of Design, fees.

III. *In the Department of Medicine.*

This Department makes a separate report.

IV. *In the Department of Law.*

Hon. Henry E. Davies, LL. D., President, voluntary services.

Hon. E. Delafield Smith, A. M., Professor, fees.

Hon. David R. Jacques, LL. B., Professor, fees.

George H. Moore, LL. D., Professor, fees.

Charles Francis Stone, A. M., Professor, fees.

Henry A. Mathews, Janitor, \$500.

3. NUMBER OF STUDENTS.

The whole number of students, undergraduates in the University, during said year was .....	94
The number of graduates at the annual Commencement, held on the 20th day of June, 1872, was .....	24
The number of students in the School of Art.....	14
The number of students in the Department of Medicine was..	197
The number of students in the Department of Law was.....	34

4. CLASSIFICATION OF STUDENTS.

I, II. *Departments of Art and of Science.*

Seniors .....	33
Juniors.....	15

\* Died 2d April, 1872.

Sophomores.....	28
Freshmen .....	28
School of Art.....	14

III. *Department of Medicine.*

No classification.....	197
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IV. *Department of Law.*

Seniors.....	24
Juniors .....	10

## 5. COMMENCEMENT EXERCISES.

The following is a copy of the scheme of the last Commencement:

## ORDER OF EXERCISES.

MUSIC—Overture, "Banditen Streiche" .....*Suppe.*

March, "Russian" .....*Mollenhauer.*

*Prayer.*

I. Latin Salutatory Oration... Maybury Wm. Fleming, New York city.

II. English Salutatory Oration.....William Aikman, Jr., New York city.

MUSIC—Galop, "Qui Vive" .....*Strauss.*

III. ORATION—"Public Opinion".....George J. Rockwell, Hoboken, N. J.

IV. ORATION—"Furnace Fires".....Albert A. Loring, New York city.

MUSIC—Polka, "Trumpet" .....*Stiegler.*

V. PHILOSOPHICAL ORATION—"The Rail, in Civilization,"

William H. Atwood, Jersey City, N. J.

VI. ORATION—"Progress of International Law,"

Frank M. Tappen, Port Richmond, S. I.

MUSIC—"Valse" .....*Suppe.*

VII. ORATION—"The Eight-Hour Law" .....Charles M. Goelz, Hoboken, N. J.

VIII. ORATION—"Science and Religion"....William B. Hurd, Jr., Brooklyn, L. I.

MUSIC—Overture, "Ihr fahrt uns Glück" .....*Suppe.*

IX. ORATION—"American Character".....Israel Russell, Jersey City, N. J.

X. ORATION—"Custom versus Nature in Primary Education,"

John C. Cozens, Brooklyn, L. I.

MUSIC—Valse, "Thousand and One Nights" ....*Strauss.*

XI. ORATION—"The Work of the XIXth Century,"

Frank Crowell, Brooklyn, L. I.

XII. ORATION—"Hereafter," with Valedictory Address,

Marcus D. Buell, Williamsburgh, L. I.

MUSIC—Valse, "The Broken Chime" .....*D. Wiegand.*

*Award of Fellowships.*

*Award of the Butler Euclidean Prizes, for the Best Essays in English Composition, by Members of the Euclidean Society.*

Messrs. John C. Van Horne and Frank A. Von Briesen, appointed to speak on this occasion, have at their own request been excused by the Faculty.

## DEGREES CONFERRED IN COURSE.

*The Degree of Bachelor of Arts will be conferred upon the following candidates, viz. :*

MARCUS DARIUS BUELL.  
MAYBURY WILLIAM FLEMING.  
GEORGE JEWETT ROCKWELL.  
JOHN CHARLES COZENS.

WILLIAM BEERS HURD, Jr.  
HERBERT AUGUSTUS LORING.  
ALBERT BEVERLY CARLTON.  
THEODORE EDWIN TOMLINSON.

*The Degree of Bachelor of Science will be conferred upon the following candidates, viz. :*

WILLIAM AIKMAN, Jr.  
WILLIAM HENRY ATWOOD.  
ISRAEL RUSSELL.  
JOHN G. VAN HORNE.  
FRANK ADELBERT VON BRIESEN.

CHARLES MICHAEL GOELZ.  
JOHN ALEXANDER ROGERS.  
GEORGE PARSONS DENMAN.  
GEORGE PURDY KISSAM.  
GEORGE WASHINGTON FERDON.

FRANK CROWELL.

*The Degree of Civil Engineer will be conferred upon the following candidates, viz. :*

WILLIAM HENRY ATWOOD.  
ALFRED CHILD.  
GEORGE W. FERDON.  
CHARLES MICHAEL GOELZ.

WILLIAM WALTER MACLAY.  
FRANK MUIR TAPPAN.  
JOHN G. VAN HORNE.  
FRANK A. VON BRIESEN.

ISRAEL RUSSELL.

*The Certificate of the Special Course will be conferred upon*

FRANCIS JOHN BARRETT and JOHN CONGER FREEMAN.

## HONORARY DEGREES CONFERRED.

*The Degree of Doctor of Philosophy will be conferred upon*

LE ROY SATTERLEE, M. D.

*The Degree of Master of Arts will be conferred, in course, upon the following persons, viz. :*

JAMES B. FINCH, JOHN P. OTIS.

*The Degree of Doctor of Medicine will be conferred.*

*The Degree of Bachelor of Law will be conferred.*

BENEDICTION.

Music—Finale.

## 6. TERMS.

The terms or sessions for studies during said year were the following :

I, II. *Departments of Arts and of Science.*

There were three terms ; the first began on 20th September, 1871, and ended with the Christmas vacation ; the second began on 2d January, 1872, and ended with the April vacation of one week, from the first Monday in April (April 1), and the third began on 2d Monday in April (April 8), and ended with the Commencement day, on the 20th June, 1872.

III. *Department of Medicine.*

There were two sessions ; the winter course began on 1st October, and continued until the 20th February, and the summer course began in the middle of March, and continued until the 1st Monday in October.

IV. *Department of Law.*

The studies of the year were pursued through three terms of twelve weeks each, without intermission, except the Christmas recess of one week.

The first term began on 2d October ; the third term ended on 19th June, 1872.

The following is the calendar for the next collegiate year, in the Departments of Art and of Science :

Examinations for admission, 17th September.

Opening of the First Term, 18th September.

Examination of all the classes begins on 19th December.

Christmas recess.

Opening of Second Term, 2d January, 1873.

Day of Prayer for Colleges, last Thursday in February.

Examination of all classes, last week in March.

Junior Exhibition, last Thursday in March.

Vacation of one week, from first Monday in April.

Opening of Third Term, second Monday in April.

Senior Examination, last week in May.

Examination of the other classes, third week in June.

Examination for admission, Tuesday, 17th June, 1873.

Commencement, Thursday, 19th June, 1873.

Vacation to third Wednesday in September, 1873.

There will be an intermission of College duties on such days as are made public holidays by law or government recommendation, and on Good Friday, when it occurs in term time.

## 7. SUBJECTS AND COURSE OF STUDY.

1. In the Department of Arts, the studies pursued were as follows :

*Freshman Class.*—In Latin, the class read, in the first term, the first book of Livy, with selections from the *Fasti* of Ovid. They had also, one day in the week, exercises in Arnold's Latin Prose Composition, and four days' recitations in the syntax of Zumpt's Latin Grammar. In the third term, the class read the *Odes* and



Epodes of Horace, and continued the study of Arnold's Latin Prose Composition and Zumpt's Latin Grammar. In Greek, the class, during the first term, read selections from the sixth and seventh books of Herodotus; during the second term, the first, ninth and twenty-first books of Homer's Odyssey, and during the third term, selections from the first and second books of Memorabilia of Socrates. One day in each week was devoted to the writing of Greek in connection with Arnold's Greek Prose Composition, in which the class studied forty-seven lessons, 127 pages. The class gave an hour daily to rhetorical study. Whatley's Elements of Rhetoric formed the text-book, and the first three of the four parts were recited. One hour in each week was devoted to essays in composition and to declamation, together with lectures upon pronunciation and the use of words. In Mathematics, the class studied Loomis' Treatise on Algebra in the first and second term. Examples not contained in the text-book were given to the class, which each member was required to work out at home and to bring to the professor carefully written out. The third term was given to Loomis' Geometry.

*The Sophomore Class.*—In Latin, the class read, in the third term, the Cato Major and the Lælius of Cicero, together with selections from his letters. The class had also recitations four days in each week in the syntax of Zumpt's Latin Grammar, and one day in the week in Arnold's Latin Prose Composition. In Greek, during the second term, read two days in the week in the popular orations of Demosthenes, and every Wednesday attended and took notes of a course of lectures on Greek Geography and Archæology as illustrated by the remains of ancient art in Greece. This course was given in connection with maps, plans and views. In Mathematics, the class, in the first term, began and finished Analytical Plane Trigonometry, with its applications to heights and distances and to surveying. In the second term, the class began and completed a course of Analytical Spherical Trigonometry, including applications to Spherical Astronomy and Navigation. In the third term, the class studied Analytical Geometry with its applications to the Conic Sections. The class studied daily for one hour the History of English Literature, Spaulding's work being used as a text-book. The work was read, with the omission only of two chapters on the Old English, to the end of the eighteenth century. Four days of the week were given to the subject, and some lectures on the scope and characteristics of English Literature were also given, as also upon the principles

of the dramatic and epic poetry of our language. The class devoted one hour weekly, alternately, to Declamation and to exercises in English Composition.

The class was occupied one hour daily, four days of each week of the first term, with Political Economy, and during two days of each week of the second term an hour daily with German. In the first and second terms the class attended lectures and recitations on General Chemistry, and in the third term on Agricultural Chemistry.

*The Junior Class.*—In Latin, the class read, in the second term, the first, third and thirteenth satires of Juvenal, the third satire of Persius, and selected chapters from the first, second, third, fourth, sixth, twelfth and fourteenth books of the Annals of Tacitus. In Greek, the class read, during the third term, the Iphigenia in Aulis of Euripides, and attended and took notes of a course of lectures on Greek Literature, from the commencement of the Attic period to the Alexandrine period. In Mathematics, the class studied the Differential and Integral Calculus and Loomis' Natural Philosophy, during the first and second terms, and Astronomy in the third term. The class, in the first term, occupied one hour daily, during four days of the week, in the study of Modern History. The text-book employed was Webers' Outline of Universal History, of which only the "Modern Period" was studied. This was carefully read and recited, with the omission of the part relating to American History, and including the course of events to the close of the French Revolution and the First Empire. The fifth day they devoted alternately to exercises in English Composition and to lectures upon Style and Methods of Discussion. In the second term, the class occupied their hour with Psychology, during four days of the week, and with alternate lectures and English Essays on the remaining day. President Porter's Elements supplied the text-book. The whole was read, excepting the two last chapters upon Imagination and the Representative Faculty, and the portion relating to Logical Methods, under the head of Thought Knowledge. A course of lectures was also given in Evidences of Christianity. In the third term the class was occupied for four days, weekly, with Logic and Comparative Physical Geography. In the former study, Thomson's "Outline of the Laws of Thought," in the latter, Guyot's "Earth and Man," were the text-books. Of Thomson, the second part, relating to "Reasoning," proper, was read. Of Guyot, the latter half of the book. The usual Rhetorical exercises, alternated with lectures, on one day in each week.

The German Language was studied one hour daily, through the first term, as a regular class study.

*The Senior Class.*—In Latin, the class read, in the first term, the first and second books of Lucretius, the *Trimemmus* and *Captivi* of Plautus, and the first of the *Tusculan Disputations* of Cicero, with the review of Lucretius and Plautus. In Greek, the class, during the second term, read critically the *Epistles to the Ephesians* and to the *Galatians*, and the *First Epistle to Timothy*, Mondays and Tuesdays in each week. During the first term, the class gave four hours each week to the study of Moral Philosophy and the *Evidences of Christianity*. The former study was by text-book, Dr. Hopkins' "Law of Love" being employed for the purpose, all of which was studied. The latter subject was pursued by lectures exclusively. The class attended a course of lectures on Chemistry in the third term.

The following is the scheme of the full course in the Department of Arts:

#### SCHEME OF STUDY IN THE DEPARTMENT OF ARTS.

##### *Freshman Class.*

###### FIRST TERM:

1st hour, Mathematics; 2d hour, Greek; 3d hour, Latin.

###### SECOND TERM:

1st hour, Mathematics; 2d hour, Rhetoric; 3d hour, Greek.

###### THIRD TERM:

1st hour, Mathematics; 2d hour, Greek; 3d hour, Latin.

##### *Sophomore Class.*

###### FIRST TERM:

1st hour, each Monday, Essays or Declamations, Political Economy; 2d hour, Trigonometry; 3d hour, Chemistry.

###### SECOND TERM:

1st hour, Trigonometry; 2d hour, \* German and Greek; † 3d hour, Chemistry.

###### THIRD TERM:

1st hour, Analytical Geometry, Calculus; 2d hour, Latin; 3d hour, English Literature.

##### *Junior Class.*

###### FIRST TERM:

1st hour, Natural Philosophy; 2d hour, Intellectual Philosophy, Natural Theology; 3d hour, German.

\* Mondays and Tuesdays.

† Wednesdays, Thursdays and Fridays.

## SECOND TERM:

1st hour, Modern History, History of Civilization; 2d hour, Latin; 3d hour, Natural Philosophy.

## THIRD TERM:

1st hour, Greek; 2d hour, Logic, Comparative Physical Geography; 3d hour, Astronomy.

*Senior Class.*

## FIRST TERM:

1st hour, Moral Science, Evidences of Revealed Religion; 2d hour, Latin; 3d hour, Greek.

## SECOND TERM:

1st hour, Constitutional Law; 2d hour, \* Greek and Geology; † 3d hour, Latin.

## THIRD TERM:

1st hour, International Law; 2d hour, Botany; 3d hour, Chemistry.

There are exercises in Composition and Declamation in the Freshman, Sophomore and Junior classes during the hours with the Professor of Rhetoric; also Essays, Reviews, Forensic Discussions in the Senior class during the first and second terms.

The Degree conferred on the completion of this course is that of Bachelor of Arts.

In the Department of Science, instruction was given by the Professors as follows:

## TO THE STUDENTS OF THE FIRST YEAR.

## FIRST TERM:

Political Economy; Plane Trigonometry, Loomis; Chemistry, Draper; Exercises in English Composition.

## SECOND TERM:

Spherical Trigonometry, Loomis; Rhetoric, Whately; Chemistry, Draper; Exercises in English Composition.

## THIRD TERM:

Analytical Geometry and Calculus, Loomis; Lineal Drawing; Draughting by Plans, Elevations and Sections; History of English Literature, Spaulding.

\* Mondays and Tuesdays.

† Wednesdays, Thursdays and Fridays.

## TO THE STUDENTS OF SECOND YEAR.

## FIRST TERM:

Natural Philosophy; Intellectual Philosophy, Porter; Natural Theology, with English Composition and German.

## SECOND TERM:

Modern History, Smyth; History of Civilization, Guizot; Geometrical and Topographical Drawing, with use of instruments and Geometrical Demonstrations; Natural Philosophy.

## THIRD TERM:

German or French; Logic, Thomson; Comparative Physical Geography, Guyot; Astronomy.

## TO THE STUDENTS OF THIRD YEAR.

## FIRST TERM:

Moral Science, Hopkins; German; Comparative Physiology, lectures.

## SECOND TERM:

Natural and Constitutional Law; Zoölogy and Geology, lectures; Analytical Chemistry.

## THIRD TERM:

International Law, Woolsey; Botany, lectures; Chemistry, lectures; Analytical Chemistry.

In the laboratory for instruction in practical Chemistry have been introduced various improvements of the best schools in Europe, to enable the students to become familiar with the qualitative and quantitative analysis of substances, the principles of chemical research as applied to Agriculture and the Manufacturing Arts, Photography, Assaying, the use of the Microscope and the Physiological examination of the various animal products and secretions.

The following is the scheme of study in the Department of Science:

## SCHEME OF STUDY IN THE DEPARTMENT OF SCIENCE.

*Preparatory.*

## FIRST TERM:

1st hour, Mathematics.

## SECOND TERM:

1st hour, Mathematics; 2d hour, Rhetoric.

## THIRD TERM:

1st hour, Mathematics.

*First, or Sophomore Year.***FIRST TERM:**

1st hour, Political Economy; 2d hour, Trigonometry; 3d hour, Chemistry.

**SECOND TERM:**

1st hour, Trigonometry; 2d hour, Rhetoric; 3d hour, Chemistry.

**THIRD TERM:**

1st hour, Analytical Geometry, Calculus; 2d hour, Drawing; 3d hour, English Literature.

*Second, or Junior Year.***FIRST TERM:**

1st hour, Natural Philosophy; 2d hour, Intellectual Philosophy, Natural Theology; 3d hour, German.

**SECOND TERM:**

1st hour, Modern History, History of Civilization; 2d hour, Geometrical and Topographical Drawing; 3d hour, Natural Philosophy.

**THIRD TERM:**

1st hour, German, or French; 2d hour, Logic, Common Physical Geography; 3d hour, Astronomy.

*Third, or Senior Year.***FIRST TERM:**

1st hour, Moral Science, Evidences of Revealed Religion; 2d hour, German; 3d hour, Comparative Physiology.

**SECOND TERM:**

1st hour, Constitutional Law; 2d hour, Zoölogy, two days, Geology, three days; 3d hour, Analytical Chemistry.

**THIRD TERM:**

1st hour, International Law; 2d hour, Botany; 3d hour, Chemistry.

For admission to the first year of this course, students must pass a satisfactory examination on the whole of Loomis' Treatise on Algebra and seven books of his Geometry.

Students in Civil Engineering are required to take the modern languages named in this scheme. They are instructed at an hour to be arranged by the Professors in that Department.

The degree conferred on the completion of this course is that of Bachelor of Science.

The course in Civil Engineering was as follows:

*First Year.*

**FIRST TERM :**

General Theory of Equations; Geometry of Planes and Solids; Conic Sections by the Synthetic Method, Loomis; Trigonometry, Plane and Spherical, Loomis; Industrial Drawing, Mahan, with the use of Instruments and Geometrical Demonstrations; Descriptive Geometry, Davies; Political Economy, with exercises in English Composition.

**SECOND TERM :**

Lineal Drawing, Draughting by Plans, Elevations and Sections; Surveying and Navigation, Loomis; Analytical Geometry, Loomis; Land Surveying and Leveling, Gillespie, with the use of Instruments and Field Operations; Modern Language; History of English Literature, Spaulding, with exercises in English Composition.

*Second Year.*

**FIRST TERM :**

Natural Philosophy, extending through the year; Higher Surveying, Geodesy; Marine Surveying; Field Topography; Topographical Drawing, Smith; Linear Perspective; Shades and Shadows; Principles of Architecture with Elements of Design; Construction and Estimates; Logic, Thomson; Intellectual Philosophy, Porter; Modern Language; Natural Theology, with English Composition and Original Declamations.

**SECOND TERM :**

Differential and Integral Calculus, Smyth; Mechanics of Engineering and Architecture; Statics; Dynamics; Theory of Machines; Stability of Structures; Strength of Materials, Mosely; Modern History; Laws of Thought and History of Civilization, with Original Declamations.

*Third Year.*

**FIRST TERM :**

Comparative Physiology; Geology; Modern Language; Moral Science; Evidences of Revealed Religion and Constitutions; Law; Essays; Forensic Discussions and Original Declamations.

## SECOND TERM:

Construction of Bridges and Mill Work; Construction of Machines, Steam Engines and Locomotives; Construction and Management of Roads and Railroads; Construction of Canals, Aqueducts, Water-works, Sewers and Drains; Botany; Analytical Chemistry; International Law.

*Degree Conferred*—That of Civil Engineer.

The course of instruction in the School of Art was as follows:

Elementary Drawing in Lead Pencils and Crayon, from examples from the Round (School of the Antique), from Nature and from living Models; Painting in Oil and Water Colors, from examples from Nature and from the living models; General Principles of Composition; School of Ornament; the Arts of Design, their application and advantages to the Mechanic Arts.

### III. *Department of Medicine.*

This Department makes a separate report, as required by the Regents.

### IV. *Department of Law.*

In this Department, the course of instruction was as follows:

The subjects were classified as follows:

I. PERSONS AND REMEDIES.

II. PROPERTY.

III. OBLIGATIONS.

IV. SUCCESSION.

These subjects were pursued (1) by required studies, in course; (2) by studies for a degree.

I. PERSONS AND REMEDIES. *In course*—Blackstone and Kent for the elements, Domestic Relations, Equity Jurisprudence, Evidence.

*For degree*—Marriage, Bankruptcy, Commercial Law; Constitutional Law, State and National; International Law, Public and Private; Pleading, the New York System of Civil Procedure, Criminal Law and Procedure, Surrogate and Admiralty Practice.

II. PROPERTY. *In course*—Blackstone and Kent for the elements.

*For degree*—Real Property, Titles and Conveyancing, Personal Property.



III. OBLIGATIONS. *In course*—Blackstone and Kent, Equity Jurisprudence.

*For degree*—Agency, Bailment, Bills and Notes, Insurance, Partnership, Sales, Shipping.

IV. SUCCESSION. *In course*—Blackstone and Kent.

*For degree*—Administration, Wills.

Instruction was given—

1. By approved text-books, read and recited in class, with exposition.

2. By lectures by the Professor on topics not treated in the text-books, or requiring fuller or more practical treatment.

3. By lectures by leading members of the bar.

4. By Moot Courts, in which cases assigned to students were argued in the presence of a Professor, on points prepared by the student. A Moot Court was held in the library every Friday at 4 p. m., by Hon. H. E. Davies, late Chief Justice of the Court of Appeals of the State of New York, President of the Faculty.

5. By drawing pleadings and papers.

Lectures by the Professors were delivered upon the following topics during the year:

1. The Sources of our Law.

(a.) The Corpus Juris and the Latin of its authors.

(b.) The Early English Latin Treatises and the Middle Age Latin.

(c.) The English Treatises in Norman French, the Year Books and their Language.

(d.) Text Writers and Commentators before Blackstone.

2. Digests and Reports, how to choose and use them.

3. Practical Conveyancing and Searching Titles.

4. The Clerical Duties of the Attorney's Office.

5. The Science of Jurisprudence, Classification, Codification.

6. Law Reform in England.

7. Law Reform in America.

## 8. EXERCISES.

The Seniors and Juniors were each required to deliver orations of their own composition, and the Sophomores and Freshmen selected orations, once in each term, in the presence of all the students, immediately after the devotional exercises in the chapel. There

were also class exercises of declamation and essay reading alternately with the Professor of Rhetoric. The Seniors read in class, once each month, an essay and a review, and had a monthly forensic discussion. In the College Societies the students had facilities of the same kind, with constant debates.

#### 9. EXHIBITIONS AND PRIZE CONTESTS.

The Junior class had an exhibition at the close of the second term, at which orations were delivered by the eight students standing highest in the class and by two students elected by the two College Societies. A prize, designated "The Webster Prize," was awarded, by a committee not connected with the University, to the best speaker on the occasion, Clifford Brown Rogers.

By legacy of Abraham Ogden Butler, of the class of 1853, provision was made for two prizes annually to members of the Eucleian Society, for the best essays, to be awarded by a committee named by the testator.

They were awarded, the first to William Aikman, Jr., and the second to George P. Denman.

In place of the former system of prizes, three fellowships have been established.

The first, of \$300, awarded in June, 1872, to Marcus Darius Buell.

The second, of \$200, to Maybury William Fleming.

The third, of \$100, to George Jewett Rockwell.

#### 10. EXAMINATIONS.

The requirements for admission, as published in the annual catalogue, are as follows:

##### *I. In the Department of Arts.*

In Mathematics, Algebra to equations of the second degree, and Plane Geometry. In Latin, four books of Cæsar's Commentaries; six books of Virgil's *Æneid*; six select orations of Cicero; Sallust's *Catiline*; Sallust's *Jugurthine War*, or the *Eclogues* of Virgil, together with twelve chapters of Arnold's Latin Prose Composition. In Greek, three books of Xenophon's *Anabasis*; one book of Homer's *Iliad*, with Prosody.

Prerequisites: Thorough preparation in Arithmetic and English Grammar; a knowledge of Descriptive and Classical Geography, United States History, Greek and Roman Antiquities.

## II. *In the Department of Science.*

For admission to the class of the first year, the candidate must pass an examination in Arithmetic, English Grammar, Geography, United States History, the whole of Loomis' Algebra, and Plane Geometry. Candidates for admission to the higher classes, in addition to the above examination, will also be examined in the studies previous to those of the year on which they propose to enter.

III, IV. In the Departments of Medicine and of Law, students may enter at any time without examination.

The entrance examinations in the Departments of Arts and of Science took place on Tuesday, 19th September, 1871, and on Tuesday, 18th June, 1872. The published requirements were adhered to.

### 11. MODES OF INSTRUCTION.

Instruction was given from the text-book, accompanied by the explanations, criticisms and analyses of the Professors. Of those subjects entirely taught by lectures, notes were taken by each student, the text-book being used only for reference. These notes were submitted to the inspection of the Professor, and the students were examined on the same.

### *University Lectures.*

A course of free lectures was delivered during the winter of 1871-72, in the University chapel, on Thursday evening in each week, from December to March, by the Professors in the Departments of Arts and of Science, and other gentlemen, on the following subjects:

By Prof. E. A. Johnson, on the Industries of the Ancient Romans.

By Prof. John W. Draper, on Spectrum Analysis; two lectures.

By Prof. Benjamin N. Martin, on the Natural Theology of the Doctrine of the Forces.

By Prof. Henry M. Baird, on Homer and his English Translators.

By Prof. George W. Coakley, on the Physical Constitution of the Sun, and on Comets; two lectures.

By Prof. Henry Draper, on Respiration; two lectures.

By Prof. E. H. Gillett, on the Future of Society.

By Prof. Charles Carroll, on Robert Browning.

By Prof. John J. Stevenson, on Coal and its Origin.

By Prof. F. D. Weisse, on Sensation and Thought.

By Whitelaw Reid, Esq., on Journalism.

*Lectures Before the Department of Law.*

A course of free lectures was delivered during the winter of 1871-72, on Friday evening of each week, from December to April, by the following gentlemen :

Prof. David R. Jacques, introductory, on Legal Education, the Need and the Method.

Charles B. Moore, Esq., on the Science and Practice of Law; a general view for students.

Ethan Allen, Esq., on Admiralty Law, and the Practice in the Federal Courts.

Charles H. Hunt, Esq., on Manners of the Bench and Bar.

William R. Martin, Esq., on Vested and Contingent Remainders.

Barnard Roelker, Esq., on the Laws regarding the Rights of Married Women to Property, in the different States of Europe, compared with those in the United States of America.

Eugene Lawrence, Esq., on Daniel Webster and his Period.

Prof. Benjamin N. Martin, on the Ethical Spirit of the Civil Law.

Henry D. Sedgwick, Esq., on the Relation and Duty of the Lawyer to the State.

Prof. Benjamin N. Martin, on the Ethical Basis of the Common Law.

Hon. H. C. Van Vorst, on the Grand Jury.

John Winslow, Esq., on the Crisis that led to the Adoption of our National Constitution.

Charles Crary, Esq., on the Writs of Mandamus and of Prohibition.

A. R. Macdonough, Esq., on the Advantage of General Culture to the Lawyer.

Hon. R. L. Larremore, on Land Tenures and Titles.

Hon. Charles J. McCurdy, on Life Insurance.

## 12. DISCIPLINE.

The administration of discipline is simple, and is characterized by kindness and patience as well as firmness and decision. The rules are printed and furnished to every student. They have been sent to the Regents and have not been changed.

## 13. GRATUITOUS AID.

Pursuant to a plan adopted by the Council on 22d June, 1871, for the reorganization of the Departments of Science and of Arts,

instruction in those Departments was given to students free of any charge for tuition.

#### 14. STATUTES AND BY-LAWS.

These remain as before reported and submitted to the Regents.

#### 15. DESCRIPTION AND VALUE OF UNIVERSITY BUILDINGS, ETC..

1. Value of buildings .....	\$300,000 00
2. Value of Libraries:	
General.. 3,024 volumes, value.....	\$9,340 00
Law..... 2,275       "       " .....	10,505 00
Society .. 1,200       "       " .....	1,200 00
	<hr/>
	21,045 00
3. Apparatus:	
Philosophical .....	\$3,000 00
Chemical .....	3,238 00
	<hr/>
	6,238 00
	<hr/>
Making a total of .....	\$327,283 00
	<hr/> <hr/>

#### 16. DESCRIPTION AND VALUE OF OTHER PROPERTY.

The various articles of furniture, cases, organs, stoves, furnaces, portraits, etc .....

\$5,000 00

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The Loring Andrews Endowment, invested in 10-40

U. S. bonds..... \$100,000 00

The John C. Green Endowment, invested in stock of  
the Branch Road of the Central Railroad of New  
Jersey.....

25,000 00

The John Taylor Johnston Endowment, in the same

25,000 00

The James Brown Endowment, in the same.....

5,000 00

The William E. Dodge Endowment, in the same.....

5,000 00

The George Griswold Endowment, on bond and mort-  
gage .....

10,000 00

The Wm. Matthew Fund, for general purposes, invested  
in 10-40 U. S. bonds.....

1,000 00

The James Suydam Fund, invested in Arkansas six  
per cent bonds.....

7,000 00

Total of invested funds.....

\$178,000 00

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#### 17. DEBTS.

The University has no permanent debt.

## 18. REVENUE.

From the Treasurer's annual report the following statements are copied :

Balance in hand per last account.....	\$1,037 14
Received for tuition and incidentals .....	2,925 26
Interest on endowments .....	11,207 29
Rents .....	15,831 45
Graduation diplomas.....	770 00
	<hr/>
	\$31,771 14
Balance overdrawn .....	317 68
	<hr/>
	<u>\$32,088 82</u>

## 19. EXPENDITURES.

From the same report the following are copied :

Salaries of instructors.....	\$24,540 00
Salary of Janitor .....	375 00
Expenses .....	6,243 32
Repairs .....	930 50
	<hr/>
	<u>\$32,088 82</u>

By clerical error in last report, the rents were stated at \$17,980.40 instead of \$17,080.40, and the balance at \$1,937.14 instead of \$1,037.14.

## 20. TABULAR STATEMENT.

Number of Departments .....	4
Number of Professors .....	32
Number of Collegiate students .....	94
Number of graduates at last Commencement:	
Department of Arts.....	10
Department of Science .....	14
Department of Medicine .....	75
Department of Law.....	22
Value of buildings and grounds .....	\$300,000 00
Value of Libraries and Apparatus .....	27,283 00
Value of other property .....	183,000 00
Revenue for the last Collegiate year.....	31,771 14
Expenditures for the last Collegiate year.....	32,088 82
Amount of debts, none.	<hr/>

## 21. PRICE OF TUITION.

I. Department of Arts.....	Free.
II. Department of Science .....	Free.
III. Department of Medicine .....	\$140 per annum.
IV. Department of Law.....	100 per annum.

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In the Departments of Arts and of Science, a charge of fifteen dollars per annum is made for lighting and warming rooms and incidental expenses.

## 22. REMARKS.

The Department of Science and Letters previously existing as one department was separated into two, to be designated respectively the Department of Science and the Department of Arts. This was done with a view to the development of the curricula of the University and the extension of the scientific department.

## 23. CLOSE OF REPORT.

This report is signed for the Council by its officers.

JNO. C. GREEN,  
*President.*

WM. R. MARTIN,  
*Secretary.*

HOWARD CROSBY,  
*Chancellor.*

## MEDICAL COLLEGES.

XXIII. COLLEGE OF PHYSICIANS AND SURGEONS,  
MEDICAL DEPARTMENT OF COLUMBIA COLLEGE,  
NEW YORK CITY.

*To the Regents of the University of the State of New York :*

The Trustees of the College of Physicians and Surgeons of the Medical Department of Columbia College, New York city, in compliance with a requisition of the Regents of the University, submit the following report for the last collegiate year ending on the 31st day of October, 1872, containing a just and true statement of facts, showing the progress and condition of the Medical Department of said College, during and at the close of said year, in respect to the several subject-matters following, viz. :

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in the Medical Department of said College, during said year, as established by the Trustees, were the following :

1. Anatomy.
2. Physiology and Hygiene.
3. Chemistry and Medical Jurisprudence.
4. Pathology and Practical Medicine.
5. Surgery.
6. Obstetrics and the Diseases of Women and Children.
7. Clinical Medicine.
8. Materia Medica and Therapeutics.
9. Venereal Diseases.
10. Diseases of the Eye and Ear.
11. Diseases of the Skin.
12. Diseases of Children.
13. Clinical Surgery.

## 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The following are the names and residences of the Trustees of the said College :

Edward G. Ludlow, M. D., Yonkers, N. Y.



Floyd Smith, Treasurer, New York city.

Edward Delafield, M. D., President, New York city.

John P. Crosby, New York city.

Gurdon Buck, M. D., New York city.

Daniel D. Lord, New York city.

James W. Beekman, New York city.

Benjamin R. Winthrop, New York city.

Edward L. Beadle, M. D., Poughkeepsie, N. Y.

George W. Wright, New York city.

\* Charles Henschel, M. D., New York city.

Hon. Frederick A. Conkling, New York city.

Rev. Sullivan H. Weston, D. D., New York city.

William Betts, New York city.

John Torrey, M. D., LL. D., New York city.

Cambridge Livingston, New York city.

Jared Linsly, M. D., New York city.

John J. Crane, M. D., New York city.

Ellsworth Eliot, M. D., Registrar, New York city.

Robert G. Remsen, New York city.

James L. Banks, M. D., New York city.

George H. Gillespie, New York city.

Edward H. Ludlow, New York city.

Edward Delafield, Jr., New York city.

Charles Clarkson Goodhue, New York city.

† Willard Parker, M. D., New York city.

The Faculty of the Medical Department of said College, including all persons charged with the duty of giving public instruction therein during said year, consisted of one or more Professors for each of the subjects enumerated in the preceding section, a Demonstrator and an Assistant Demonstrator of Anatomy and six lecturers of the summer session.

The other officers or servants of the Medical Department of said College, charged with duties therein other than those of public instruction, during said year, were a President, Vice-President, Registrar, Treasurer, twenty-five Trustees (the President, Vice-President, Registrar and Treasurer being included in this number), a Curator, Librarian, Clerk and Janitor.

The names of the several persons holding offices or places in the

\* Died September 18th, 1872.

† Recently elected to fill the vacancy made by the death of Charles Henschel, M. D.

Medical Department of said College during said year, with the offices or places held by them respectively, and the salaries or annual compensation for official services allowed to each of them, were as follows :

Edward Delafield, M. D., President and Professor Emeritus. None.

Edward L. Beadle, M. D., Vice-President. None.

Ellsworth Eliot, M. D., Registrar. None.

Floyd Smith, Treasurer. None.

John Torrey, M. D., L.L. D., Professor Emeritus of Chemistry and Botany. None.

William Detmold, M. D., Professor Emeritus of Clinical and Military Surgery. None.

Willard Parker, M. D., Professor of Clinical Surgery. None.

Thomas M. Markoe, M. D., Professor of Surgery. Fees.

Alonzo Clark, M. D., Professor of Pathology and Practical Medicine. Fees.

John C. Dalton, M. D., Professor of Physiology and Hygiene. Fees.

Samuel St. John, M. D., Professor of Chemistry and Medical Jurisprudence. Fees.

Charles F. Chandler, Ph. D., Adjunct Professor of Chemistry. Fees.

T. Gaillard Thomas, M. D., Professor of Obstetrics and Diseases of Women and Children. Fees.

James W. McLane, M. D., Adjunct Professor of Obstetrics and Diseases of Women and Children. Fees.

John T. Metcalfe, M. D., Professor of Clinical Medicine. Salary.

Henry B. Sands, M. D., Professor of Anatomy. Fees.

Thomas T. Sabine, M. D., Adjunct Professor of Anatomy. Fees.

James W. McLane, M. D., Professor of Materia Medica and Therapeutics, to October 1st, 1872. Fees.

Edward Curtis, M. D., Lecturer on Materia Medica and Therapeutics, since October 1st, 1872. Fees.

Fessenden N. Otis, M. D., Clinical Professor of Venereal Diseases. None.

Cornelius R. Agnew, M. D., Clinical Professor of Diseases of the Eye and Ear. None.

William H. Draper, M. D., Clinical Professor of Diseases of the Skin. None.

Abraham Jacobi, M. D., Clinical Professor of Diseases of Children. None.

John G. Curtis, M. D., Demonstrator of Anatomy. Fees.

Samuel B. St. John, M. D., Assistant Demonstrator of Anatomy. Fees.

Charles McBurney, M. D., Assistant Demonstrator of Anatomy, since October 1st, 1872. Fees.

*Faculty of the Summer Session.*

Fessenden N. Otis, M. D., Professor of the Diseases of the Genito-Urinary Organs. Fees.

A. Brayton Ball, M. D., Lecturer on Diseases of the Kidney. Fees.

James L. Little, M. D., Lecturer on Operative Surgery and Surgical Dressings. Fees.

Edward C. Seguin, M. D., Lecturer on Diseases of the Nervous System. Fees.

George G. Wheelock, M. D., Lecturer on Physical Diagnosis. Fees.

Edward Curtis, M. D., Lecturer on Normal and Pathological Histology. Fees.

Christopher M. Bell, M. D., Curator of the College Museum. None.

Gouverneur M. Smith, M. D., Librarian. None.

Edward T. Boag, Clerk. Salary.

Andrew Laughlin, Janitor. Salary.

3. NUMBER OF STUDENTS.

The whole number of the students attending the regular course of instruction during said year was three hundred and fifty. The number of graduates at the last annual Commencement, held February 28th, 1872, was seventy-seven. The whole number of graduates in Medicine is twenty-seven hundred and fifty-eight.

The age of the graduates being required by law to be twenty-one years, none have been admitted to the degree under that age. The average age of graduates at the last commencement was over twenty-one years; precisely how much cannot be stated, as information on this subject is not asked for beyond that required by law.

## 4. CLASSIFICATION OF STUDENTS.

The students attending the Medical Department of said College are not classified. The majority attend a part of the lectures each session, so as to complete two full courses, at least, during the three years.

## 5. COLLEGE TERM OR SESSION.

The term or session for study in the Medical Department of the said College during said year was the following: winter session, from October 2d, 1871, to February 27th, 1872; summer session, for three months from March 11th, 1872. The present session began October 1st, 1872, and will continue until about March 1st, 1873.

## 6. MODE OF INSTRUCTION.

In the plan of instruction adopted in the College, Clinical teaching constitutes an important and prominent feature; all the practical subjects, upon which full courses of lectures are delivered, being illustrated at the bedside or upon the cadaver. The extensive hospitals, dispensaries and infirmaries of the city, in which the Faculty have official positions, are made available for the instruction of students.

Cliniques are daily held in the College building, at which every variety of disease is presented, investigated and prescribed for, and important operations are performed. In many instances the subsequent management of cases is left to the care of advanced students, under the supervision of their teachers.

The practice of taking notes at the lectures and the cliniques is very general, though not compulsory. The principal test of scholarship is in the examination for the degree of Doctor of Medicine. The attendance upon lectures, though not compulsory, is very general. Every student is under the instruction of a preceptor selected by himself, who has the general charge of his studies and recitations.

## 7. DISCIPLINE.

The students in the Medical Department of said College are expected to observe the rules of conduct adopted by gentlemen. There has been, during the past year, no case requiring discipline.

The Faculty of the College offer prizes for the most meritorious theses, which are announced at the Commencement; and the names of the successful competitors, with the subjects of their theses, are printed in the annual catalogue of the College.

## 8. GRATUITOUS AID.

The College does not afford gratuitous aid to indigent students. Theological students are admitted to all the lectures by paying the matriculation fee only; there were four thus privileged during the last course of lectures.

## 9. STATUTES OR BY-LAWS OF THE COLLEGE.

The by-laws and regulations of the College are those approved by your honorable body on the 21st day of February, 1868.

## 10. EXAMINATIONS AND GRADUATION.

Those who pay the matriculation fee are enrolled as students of the College. Before receiving the degree of Doctor of Medicine, they must furnish a certificate that they have studied medicine for three years, under a regularly authorized physician; that they are, at least, twenty-one (21) years old, and have a good moral character, and they must pass a satisfactory examination. It is also required of them to write and submit to the Faculty a thesis on some subject appertaining to the science of medicine, and to pay the examination fee.

The examinations are oral, before the professors individually, and are continued during several evenings, as the number of candidates may require. Five members of the Board of Trustees, physicians, are appointed by the President, to attend the examinations. If found qualified, as certified to by the Faculty and said committee of Trustees, the degree of Doctor of Medicine is conferred upon the successful candidate.

## 11. DESCRIPTION AND VALUE OF BUILDINGS, ETC.

1. The lot upon which is the College building is at the north-east corner of Fourth avenue and East Twenty-third street, ninety-eight feet six inches on the avenue, and seventy-five feet on East Twenty-third street; the size of the building is ninety-eight feet nine inches by sixty-five feet. The value of this property is estimated at one hundred and fifty thousand dollars (\$150,000).

2. The College library, in fair preservation, contains about twelve hundred (1,200) volumes, and may be estimated at about one thousand dollars (\$1,000).

3. The chemical and philosophical apparatus belong to the individual professors who use them. The College possesses a valuable cabinet of materia medica, the gift of the late Prof. John B. Beck,

Dr. J. Smyth Rogers and others; also anatomical and pathological preparations, plates, casts and drawings, the value of which, with the cabinet of materia medica, is not less than three thousand five hundred dollars (\$3,500).

The total amount of the above values is one hundred and fifty-four thousand five hundred dollars (\$154,500).

## 12. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

The College owns, in trust, fifty-three (53) shares of the United States Trust Company, New York city, par value five thousand three hundred dollars (\$5,300), given by the late Jacob Harsen, M. D., a graduate of the College.

There is also an accumulation of interest upon this fund, amounting to one thousand five hundred and ninety-seven dollars and twenty-one cents (\$1,597,21).

The income from this fund is awarded as prizes for the best clinical reports.

The College has also a sinking fund, amounting to two thousand dollars (\$2,000).

## 13. DEBTS.

The debts upon the real estate owned by the College amounted, at the close of the last collegiate year, to eighty-eight thousand seven hundred and twenty-three dollars and twenty-nine cents (\$88,723,29). The interest accrued and paid during the said year amounted to four thousand two hundred and fifty dollars and sixty-four cents (\$4,250,64).

The Trustees have made arrangements for a sinking fund, now amounting to two thousand dollars (\$2,000), to which the Faculty contribute one thousand dollars (\$1,000) annually.

## 14. REVENUE.

1. Amount collected or considered collectible, during said year, on account of matriculation fees.....	\$1,660 00
Graduation fees .....	2,250 00
2. Rent of stores and lecture rooms .....	9,100 00
<b>Total amount of revenue .....</b>	<b>\$13,010 00</b>

15. EXPENDITURE.

Amount paid or payable on liabilities incurred during said year, on the following accounts :

1. For interest during said year on debts due from the College .....	\$4,250 64
2. For repairs of College property .....	917 66
3. For all incidental expenses, not included in above..	5,782 94
4. Contribution to the sinking fund .....	2,000 00
	<hr/>
	\$12,951 24
	<hr/>

16. FEES.

Matriculation fee .....	\$5 00
Graduation fee .....	30 00
Full course of lectures.....	140 00
The ticket of the Demonstrator of Anatomy is.....	10 00
	<hr/>

17. TABULAR STATEMENT.

Number of Professors (including Emeritus and Clinical Professors) .....	19
Number of lecturers ( apart from the Professors).....	5
Number of students during the last year.....	350
Number of graduates during the last year.....	77
Whole number of graduates.....	2,758
Value of College building and grounds .....	\$150,000 00
Value of library and apparatus .....	4,500 00
Amount of matriculation fees received during the last year .....	1,660 00
Amount of graduation fees received during the last year.....	2,250 00
Total expenditure during the year .....	12,951 24
Amount of debts of the College .....	88,723 29
	<hr/>

18. REMARKS.

The affairs of the College are so fully stated under the different headings of the report, that nothing further need be said.

19. CLOSE OF REPORT.

This report was prepared by a committee of three members appointed by the President. It was then submitted to the Trustees

at an adjourned quarterly meeting, called for this purpose, on December 12th, 1872, and, having received their approval, it was ordered to be sent to the Honorable Board of Regents of the University of the State of New York, signed by the President, Treasurer and Registrar, and sealed with the seal of the College.

EDWARD DELAFIELD, M. D.,  
*President.*

[L. s.]

FLOYD SMITH, *Treasurer.*  
ELLSWORTH ELIOT, M. D.,  
*Registrar.*



## XXIV. GENEVA MEDICAL COLLEGE, GENEVA, ONTARIO COUNTY.

Report of the Faculty to the Regents of the University, January 22, 1872.

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

1. Chemistry, Pharmacy, Toxicology and Medical Jurisprudence.
2. Principles and Practice of Surgery.
3. General and Special Anatomy.
4. Physiology, Pathology and Microscopic Anatomy.
5. Practice of Medicine, and Diseases of Women and Children.
6. Obstetrics and Materia Medica.
7. Diseases of the Eye and Ear.

### 2. FACULTY AND OTHER COLLEGE OFFICERS.

John Towler, M. D.; Frederick Hyde, M. D.; Hiram N. Eastman, M. D.; Nelson Nivison, M. D.; E. P. Allen, M. D.; Charles E. Rider, M. D.

M. Hyde, M. D., Demonstrator.

Charles Derby, Janitor.

### 3. NUMBER OF STUDENTS.

The number of students that attended the last course of lectures was twenty-two. With the exception of one, they were all above twenty years of age. The number who received the degree of M. D. was eight; the ages of these were all above twenty-one respectively.

### 4. CLASSIFICATION OF STUDENTS.

1. Those attending the first course .....	11
2. Those attending the second course .....	8
3. Those attending the third course .....	<u>3</u>

5-10.

The same as heretofore.

### 11. PRICE OF INSTRUCTION.

Matriculation fee .....	\$5 00
Graduation fee .....	20 00
Ticket for the full course .....	<u>67 00</u>

12. MODE OF REVENUE.

The matriculation and graduation fees are devoted to the payment of the annual incidental expenses of the College and to the preservation and improvement of the College property. The amounts paid by the students respectively for instruction are the sole revenue of the Professors.

13. DEBT.

The College has no debts.

14. FEES FOR INCIDENTAL EXPENSES COLLECTED.

Matriculation fees.....	\$105 00
Graduation fees .....	160 00
Dissection fees .....	75 00
	<hr/>
	\$340 00
	<hr/>

15. EXPENDITURE.

Insurance.....	\$40 00
Printing and advertising.....	85 00
Diplomas, etc. ....	32 50
Anatomical material .....	65 50
Fuel .....	67 50
Janitor's wages.....	45 00
Repairs .....	24 98
Sundries.....	15 11
	<hr/>
	\$375 59
	<hr/>

All which is respectfully submitted.

J. TOWLER, M. D.,  
Dean of the Faculty.

## XXV. MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

The Medical Faculty respectfully presents to the Council the following report of the Medical Department, December 4th, 1872.

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

1. Professorship of the Principles and Operations of Surgery, with Military Surgery and Hygiene.
2. Professorship of Descriptive and Surgical Anatomy.
3. Professorship of Institutes and Practice of Medicine.
4. Professorship of Materia Medica and Therapeutics.
5. Professorship of Midwifery and Diseases of Women and Children.
6. Professorship of Chemistry.
7. Professorship of Physiology.

### 2. FACULTY AND OTHER COLLEGE OFFICERS.

Martyn Paine, M. D., LL. D., Emeritus Professor of Materia Medica and Therapeutics.

John William Draper, M. D., LL. D., Emeritus Professor of Chemistry and Physiology, President of the Faculty.

Alfred C. Post, M. D., LL. D., Professor of Surgery.

John C. Draper, M. D., Professor of Chemistry.

Alfred L. Loomis, M. D., Professor of Institutes and Practice of Medicine.

Charles A. Budd, M. D., Professor of Midwifery.

William Darling, M. D., F. R. C. S., Professor of Anatomy.

Henry Draper, M. D., Professor of Physiology.

William H. Thompson, M. D., Professor of Materia Medica.

Besides the foregoing, lectures have been delivered by the following professors: D. B. St. John Roosa, M. D.; Joseph Kammerer, M. D.; J. W. S. Arnold, M. D.; F. D. Weisse, M. D.; H. S. Hewitt, M. D.; M. S. Buttles, M. D.; Erskine Mason, M. D.; W. R. Gillette, M. D.; J. W. Howe, M. D.; C. T. Pardie, M. D.

### 3. NUMBER OF STUDENTS.

Number of students during present session.....	197
Number of graduates since last report.....	<u>75</u>

It is believed that none of the students are under the age of eighteen years. The age of the graduates being by law required to be twenty-one years, none have been admitted under that age.

4. CLASSIFICATION OF STUDENTS.

There is no classification of students.

5. COLLEGE TERM SESSION.

The regular winter term commenced on October 1st, and will continue till February 20th. The summer term began in the middle of March, and continued till the beginning of the winter session.

6. MODES OF INSTRUCTION.

The mode of instruction is by lectures, clinics and hospital visits. The only examinations are those for admission to a degree; they take place at the close of the winter session and in May.

7. DISCIPLINE.

There are no special rules of discipline. General propriety and decorum are required. No punishments have been inflicted.

8. GRATUITOUS AID.

The students are admitted annually as beneficiaries, on the payment of forty-three dollars and the matriculation fee.

9. STATUTES AND BY-LAWS.

There are no statutes or by-laws to the Medical Department.

10. COLLEGE BUILDING AND OTHER PROPERTY.

These remain the same as at the date of the last report. The edifice is situated at No. 426 East Twenty-sixth street, opposite Bellevue Hospital. The museum, laboratory, etc., are receiving, continually, additional specimens and apparatus.

11. REVENUE.

The revenue consists of

A matriculation fee from each student . . . . .	\$5 00
A graduation fee . . . . .	30 00
Fee for one course of lectures . . . . .	140 00
	<u>          </u>

Of the graduation fee, ten dollars are paid by the Medical Faculty to the Council of the University.

12. DEBTS.

The College has no debts.

All which is respectfully submitted.

JOHN W. DRAPER, M. D.,  
*President of the Faculty.*

## XXVI. ALBANY MEDICAL COLLEGE.

*To the Regents of the University of the State of New York :*

The Trustees and Faculty of the Albany Medical College, in compliance with a requisition of the Regents of the University, submit the following report for the last Collegiate year, ending on the 31st December, 1872, containing a just and true statement of facts, showing the progress and condition of said College during and at the close of said year, in respect to the several subject-matters following, viz.:

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The Professorships in said College during said year, as established by the Trustees, were the following :

A Professorship of the Theory and Practice of Medicine.

A Professorship of the Principles and Practice of Surgery and Clinical Surgery.

A Professorship of the Diseases of Women.

A Professorship of the Diseases of the Nervous System and of the Mind.

A Professorship of Obstetrics and Diseases of Children.

A Professorship of Physiology and Clinical Medicine.

A Professorship of General and Special Anatomy.

A Professorship of Surgical and Descriptive Anatomy.

A Professorship of Ophthalmic and Orthopedic Surgery.

A Professorship of Materia Medica.

A Professorship of Chemistry and Toxicology.

A Professorship of Medical Jurisprudence.

## 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The following are the names and residences of the Trustees of said College :

Ira Harris, President, Albany, N. Y.

Amasa J. Parker, Vice-President, Albany, N. Y.

George Dexter, Treasurer and Secretary.

Robert H. Pruyn, Albany, N. Y.

Bradford R. Wood, Albany, N. Y.

Thomas McElroy, Albany, N. Y.

Henry H. Martin, Albany, N. Y.  
 Erastus D. Palmer, Albany, N. Y.  
 Orlando Meads, Albany, N. Y.  
 John F. Rathbone, Albany, N. Y.  
 Stephen O. Shepard, Albany, N. Y.  
 Henry R. Pierson, Albany, N. Y.  
 Thomas W. Olcott, Albany, N. Y.  
 Charles Van Benthuyssen, Albany, N. Y.  
 Isaac W. Vosburgh, Albany, N. Y.  
 George B. Steele, Albany, N. Y.  
 Joseph H. Ramsey, Albany, N. Y.  
 Charles B. Lansing, Albany, N. Y.  
 Samuel H. Ransom, Albany, N. Y.  
 Samuel Gross, Albany, N. Y.  
 James McNaughton, Albany, N. Y.  
 Alfred Van Santvoord, New York city.  
 \* William H. De Witt, Albany, N. Y.  
 \* Archibald McClure, Albany, N. Y.

The Mayor and Recorder of the city of Albany, *ex officio*.

The Faculty of said College, including all persons charged with the duty of giving public instruction therein during said year, consisted of:

James McNaughton, M. D., President of said College, and Professor of the Theory and Practice of Medicine.

James H. Armsby, Professor of the Principles and Practice of Surgery and Clinical Surgery.

Edmund R. Peaslee, M. D., LL. D., Professor of the Diseases of Women.

Meredith Clymer, M. D., Professor of Diseases of the Nervous System and of the Mind.

William P. Seymour, M. D., Professor of Obstetrics.

John V. Lansing, M. D., Registrar and Librarian, and Professor of Physiology and Clinical Medicine.

Albert Vanderveer, M. D., Professor of General and Special Anatomy.

Henry R. Haskins, M. D., Professor of Surgical and Descriptive Anatomy.

George T. Stevens, M. D., Professor of Ophthalmic and Orthopedic Surgery.

\* Deceased during year.

John M. Bigelow, M. D., Professor of *Materia Medica*.

Maurice Perkins, A. M., M. D., Professor of Chemistry and Toxicology.

Byron W. Steenburgh, M. D., Demonstrator of Anatomy.

Willis G. Tucker, M. D., Assistant to the Professor of Chemistry.

The other officers of said College, charged with duties therein other than those of public instruction during said year, were :

Henry March, M. D., Curator of the Museum.

William Hailes, M. D., Assistant Curator of the Museum.

Joseph Knibbs, Janitor of the College Building.

The names of the Curators, whose duties are advisory and intermediate between the College, the medical profession and the public, and three of whom are required to be present at, to take part in the examination and to decide upon the qualifications of the candidates for graduation brought before them by the Faculty of the College, are :

James P. Boyd, M. D.

Uriah G. Bigelow, M. D.

Peter McNaughton, M. D.

Samuel H. Freeman, M. D.

There is no salary or annual compensation allowed to the Faculty or officers above named, with the exception of Joseph Knibbs, Janitor, whose salary is \$240 per year. The Professors receive their compensation in the sale of their respective tickets to the students attending lectures.

### 3. NUMBER OF STUDENTS.

The whole number of students matriculating and attending lectures, during the collegiate year 1872, was ninety-two.

The number of graduates in medicine at the last annual Commencement, held December 23, 1872, was twenty-five.

The ages of the graduates being required by law to be twenty-one years, none have been admitted to the degree under that age.

The average age of the graduates at the last Commencement was twenty-four years.

### 4. CLASSIFICATION OF STUDENTS.

There was no classification of students. All of the graduating class had attended two or more regular courses of lectures in incorporated Medical Colleges, and had pursued the study of medicine, for three years previously, under the care of a practicing physician or surgeon.



**5. COLLEGE TERM OR SESSION.**

The term or session for study in said College, during said year, was the following, to wit: sixteen weeks, from the 3d of September, 1872, to the 23d of December, 1872.

The next College term or session will commence on the first Tuesday of September, 1873, and will continue twenty weeks, being a lengthening of the term of study, in future, of four weeks.

**6. MODE OF INSTRUCTION.**

The general process of instruction adopted in said College, during said year, was by public didactic and clinical lectures at the College and City Hospital, by demonstrations and exercises in the chemical laboratory and dissecting room, by daily examinations upon the subjects of lectures previously given, and by evening exhibitions and illustrations, by means of a camera and the oxyhydrogen light, of pathological and normal anatomy.

**7. DISCIPLINE.**

The general principle of discipline adopted in the College, during the year, has been simply to require the observance of gentlemanly decorum and propriety in the several relations of students and Professors. While recognizing the existence of the right of expelling a student for proper cause, the Faculty have had no occasion for exercising it during the past year.

**8. GRATUITOUS AID.**

Provision is made for the gratuitous education of certain worthy indigent students (by preference the sons of physicians and clergymen), who come recommended by the Censors of the several medical districts of the State of New York. The number of students during said year who were educated, in whole or in part, gratuitously, was eight.

**9. BY-LAWS OF THE COLLEGE.**

Under this head, reference is made to the copy of the By-laws of the College heretofore transmitted to the Regents, and to the accompanying circular, in which are contained the general regulations and requirements for attendance at and graduation from the College.

**10. EXAMINATIONS AND GRADUATION.**

No preliminary examination is required for admission. The examination for graduation is held, in the first instance, separately

by each Professor, and is conducted orally and in part by written questions upon the several branches in medicine. The Faculty, after such examination, at a regular meeting, decide by ballot upon the admission of the candidate to a further examination before the Curators and the Faculty in joint meeting assembled. After having passed this examination satisfactorily, and complied with the requirements of the College as regards time of study, the presentation of a thesis and the certificates of good moral character, he is thereupon recommended by the Faculty and Curators for the degree of Doctor of Medicine.

#### 11. DESCRIPTION AND VALUE OF BUILDINGS.

Under this head, reference is made to previous reports. No additional buildings have been erected for the College during the past year. Alterations and improvements in the arrangements of lecture rooms, the cushioning of seats and the heating of the building generally have been perfected during the year. The building is conveniently situated, well equipped and admirably adapted for the purposes of medical instruction.

The number of books in the College Library (generally in excellent condition) is nearly 5,000, of the value of \$6,800.

The chemical apparatus belonging to the College and the working furniture of the laboratory is amply sufficient for the wants of the medical student, and for the working of all qualitative and quantitative chemical analyses. A superior analytical balance has been recently added to the furniture of the laboratory.

Additions have been made to the collections of *Materia Medica* and to the Anatomical Museum. This latter, in the number, rarity and completeness of its specimens, is excelled by few museums in the country.

The estimated value of the library .....	\$6,800 00
The estimated value of chemical apparatus .....	1,100 00
The estimated value of materia medica collection ....	700 00
The estimated value of museum .....	25,500 00
	<hr/>
	\$34,100 00
	<hr/>

#### 12. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

No property or funds, other than what is referred to under the foregoing divisions of this report, belong to or as yet have become available to the College.

## 13. DEBTS.

This College is free from debt.

## 14. REVENUE.

The revenue of the College (aside from the fees received by the Professors for lecture tickets) is derived from the matriculation and graduation fees, and is as follows :

From matriculation fees .....	\$460 00
From graduation fees .....	625 00
Total amount of revenue .....	<u>\$1,085 00</u>

## 15. EXPENDITURES.

The expenditures for repairs, heating apparatus and incidental expenses during the year have been \$2,640.75.

## 16. FEES.

Matriculation fee .....	\$5 00
Graduation fee .....	25 00
Full course of lectures .....	100 00
Perpetual ticket .....	<u>150 00</u>

*Tabular Statement.*

Number of Professors .....	12
Number of students during the last year .....	92
Number of graduates during the last year .....	25
Whole number of graduates since organization of College .....	<u>1,176</u>
Value of library, chemical apparatus and anatomical museum .....	\$34,100 00
Received during the last year .....	460 00
Received for graduation fees .....	<u>625 00</u>

## 17. REMARKS.

In pursuance of a resolution passed at a joint meeting of the Trustees of the Albany Medical College, the Albany Law School, and the Dudley Observatory, held November 30, 1872, a union of these several institutions with Union College, of Schenectady, N. Y., was inaugurated at the Commencement of the Medical College, in the city of Albany, on the 23d of December, 1872.

This arrangement, as stated by President Potter, of Union College, was declared to be, "not to create new and struggling institutions, but, in accordance with the spirit of the age, to consolidate and thus to strengthen and perfect institutions already existing.

"The institutions above named unite to form a Union University, their relation to Union College, as the nucleus, to be similar to that subsisting between Harvard, Yale or Columbia, and the related schools of medicine, law, etc.; with the proviso that each institution reserves all its legal rights and its corporate independence and its location intact, and so with each board of trustees and faculty.

"In its preparatory, collegiate and post-graduate departments, and otherwise, each is bound to advance the well-being of all, and all to coöperate for the well-being of each.

"Their mutual relations are to be adjusted as experience ripens, and advantageous results are evidently dependent on further developments, under the general conception of the university idea."

Under this plan, thus inaugurated, the Albany Medical College henceforth takes its position as the Medical Department of the Union University of the State of New York; to continue and to increase, it may be hoped, its usefulness as an institution, giving its students a good, sound, solid, medical education, and the public, skillful, competent and well educated physicians and surgeons.

GEORGE DEXTER,

*Secretary of Board of Trustees of Albany Med. College.*

JOHN V. LANSING, M. D.,

*Registrar of Albany Medical College.*

## XXVII. MEDICAL DEPARTMENT OF THE UNIVERSITY OF BUFFALO, ERIE COUNTY.

*To the Regents of the University of the State of New York:*

The Council of the University of Buffalo, in compliance with the requisition of the Regents of the University, submit the following report for the last collegiate year, ending February 25, 1872, containing a just and true statement of facts, showing the condition of the Medical Department of said University during and at the close of said year, in respect to the several subject-matters following, viz.:

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

1. Materia Medica and Hygiene.
2. Obstetrics and Diseases of Women and Children.
3. Principles and Practice of Surgery and Clinical Surgery.
4. Chemistry and Pharmacy.
5. Principles and Practice of Medicine and Clinical Medicine.
6. Special Surgery.
7. General and Descriptive Anatomy.
8. Physiology and Microscopy.

### 2. COUNCIL, FACULTY AND OTHER COLLEGE OFFICERS.

Hon. Millard Fillmore, Chancellor of the University.

#### *Council.*

Orsamus H. Marshall, President.

James Hollister, Treasurer.

George Hadley, Secretary.

Elbridge G. Spaulding,

George N. Burwell,

George R. Babcock,

George Hadley,

Orlando Allen,

Thomas F. Rochester,

James T. White,

George S. Hazard,

John Wilkinson,

George E. Hayes,

John D. Sheppard,

Julius F. Miner,

James Hollister,

Joseph Warren,

James N. Matthews.

Sanford Eastman, member elect from the Faculty.

Mayor of the city of Buffalo, *ex officio*.

*Faculty.*

The Faculty of said University, during said year, consisted of eleven professors and the Demonstrator of Anatomy.

The names are as follows :

1. Charles Brodhead Coventry, Emeritus Professor of Physiology and Medical Jurisprudence.
2. Charles Alfred Lee, Emeritus Professor of Materia Medica and Hygiene.
3. Sandford Eastman, Emeritus Professor of Anatomy and Clinical Surgery.
4. James P. White, Professor of Obstetrics and Diseases of Children.
5. George Hadley, Professor of Chemistry and Pharmacy.
6. Thomas F. Rochester, Professor of Principles and Practice of Medicine and Clinical Medicine.
7. Edward M. Moore, Professor of Principles and Practice of Surgery.
8. William H. Mason, Professor of Physiology and Microscopy.
9. Julius F. Miner, Professor of Special Surgery.
10. H. A. Eastman, Lecturer upon Materia Medica and Hygiene.
11. Milton G. Potter, Professor of Anatomy.
12. M. B. Folwell, Demonstrator of Anatomy.

3. NUMBER OF STUDENTS.

The whole number of students attending the regular course of instruction was one hundred and one (101).

The number of graduates was thirty-six (36).

The annual Commencement was held February 20, 1872.

No one was admitted to examination for graduation who was not twenty-one years old, and who had not been studying medicine three years. The average age of graduates was twenty-six years.

4. CLASSIFICATION OF STUDENTS.

The number of students attending their first course of lectures was about fifty.

The number attending their second course of lectures was forty-one.

The number attending their third course was ten.

## 5. COLLEGE TERMS.

The regular lecture term commenced on the first Wednesday in November, 1871, and continued sixteen weeks. There was a preliminary term of four weeks devoted to practical dissections and clinical lectures at the hospitals.

## 6. MODE OF INSTRUCTION.

The terms or sessions for study in the Medical Department of said College during said year were the following :

The regular lecture term, commencing the first Wednesday in November, 1871, and continuing sixteen weeks; and a preliminary term of four weeks devoted to dissections and clinical lectures in the hospitals. The instruction was by lectures, demonstrations, clinical instructions and recitations in the sciences of Medicine, Surgery and the collateral sciences. Each Professor examines the student upon the lectures of the preceding day. The average number of lectures during each day was between five and six.

## 7. DISCIPLINE.

No occasion for the exercise of this power occurred.

No provision for gratuitous instruction was made, and it is not deemed desirable that any such provision be made.

## 8. STATUTES AND BY-LAWS.

The Regents are respectfully referred to the annual circular for the general regulations of the Medical Department of the University.

## 9. DESCRIPTION AND VALUE OF THE COLLEGE BUILDINGS.

The building occupied by the Medical Department of the University is a stone edifice, situated on the corner of Main and Virginia streets, and is fifty-four feet in width by one hundred in depth, four stories high, and contains ample and convenient rooms for dissections, museum, lectures and all the different departments of medical instruction. About \$14,000 have been expended in the construction. The lot on which the building is placed has a depth of 200 feet, and an average width of seventy-five feet, and is worth at least \$5,000.

The Library contains a few hundred volumes.

The chemical and philosophical apparatus, etc., is the property of the Professor of Chemistry and Pharmacy. The Anatomical and

Pathological Museum and Cabinet of Materia Medica are valued at \$600. This does not include the private property of the several Professors, deposited in the Museum and used in the courses of instruction.

#### 10. OTHER COLLEGE PROPERTY.

The College possesses no other property.

#### 11. DEBTS.

There is due on the lot and building \$5,000, secured by bond and mortgage.

#### 12. EXPENDITURES.

The income derived from the graduation and matriculation fees was expended in the payment of incidental expenses, as fuel, light, janitor, repairs and interest on the debt.

#### 13. FEES.

Matriculation fee .....	\$5 00
Graduation fee .....	25 00
Dissecting ticket (demonstrator's) .....	5 00
Full course of lectures .....	75 00
Perpetual ticket .....	125 00
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#### 14. EXAMINATION AND GRADUATION.

The examination for graduation is held before a joint board consisting of the Faculty and Curators. It is conducted orally, and is continued for a longer or shorter time, till every member of the board is satisfied as to the qualifications of each candidate. Finally, the vote on each individual is taken by ballot. For further particulars, the Regents are respectfully referred to the accompanying circular.

#### 15. REMARKS.

The Hospitals of the Sisters of Charity and the Buffalo General Hospital are situated within easy reach of the College, and afford ample clinical material. The Professors of Medicine and Surgery are attending medical officers of the hospitals from November 1st to March 1st, in each year. The students visit the hospitals with the attending physician and surgeon, and two half days in each week are



occupied in clinical instructions in hospitals. These facilities are extended by outside patients, who come before the class for medical treatment or surgical operation.

The foregoing report is respectfully submitted by the undersigned, with the seal of the University of Buffalo attached, in behalf of the Council of said University.

[L. s.]

BUFFALO, Oct. 10, 1873.

O. H. MARSHALL, *President, etc.*

JULIUS F. MINER, M. D., *Dean.*

## XXVIII. LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, N. Y.

*To the Regents of the University of the State of New York:*

The Regents of the Long Island College Hospital, in compliance with a requisition of the University of the State of New York, respectfully submit the following report of the last collegiate year, ending on the 25th day of June, 1872, containing a just and true statement of facts, showing the condition and progress of said College, during and at the close of said year, in respect to the several subject-matters following, viz.:

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in the collegiate department during said year, as established, were the following:

Principles and Practice of Medicine and Clinical Medicine, one chair.

Anatomy.

Obstetrics and Diseases of Children.

Chemistry and Toxicology.

Medical and Surgical Diseases of Women, and Clinical Obstetrics, one chair.

Materia Medica and Therapeutics.

Surgery.

Physiology and Microscopic Anatomy.

Ophthalmology.

Diseases of the Ear.

## 2. REGENTS, FACULTY AND OTHER COLLEGE OFFICERS.

*Regents.*

F. W. Kentgen, Esq.

Reuben W. Ropes, Esq.

Orville Oddie, Esq.

R. J. Dodge, Esq.

J. H. Prentice, Esq.

C. L. Mitchell, Esq.

John C. Southwick, Esq.

John C. Beale, Esq.

Hon. Jesse C. Smith.

Charles H. Christmas, Esq.

Simeon B. Chittenden, Esq.

William B. Hunter, Esq.

Joseph Ripley, Esq.

H. C. Dyke, Esq.

T. L. Mason, Esq.

Horace Webster, Esq.

Cornelius Dever, Esq.  
Hon. Samuel Sloan.

George W. Mead, Esq.  
H. D. Polhemus, Esq.

Hon. Demas Barnes.

*Officers.*

John J. Van Nostrand, Esq., President.

Thomas H. Rodman, Esq., Vice-President.

William J. Osborne, Esq., Secretary.

William H. Dudley, M. D., Treasurer.

The names of persons holding offices or places in said College were as follows :

*Council.*

T. L. Mason, M. D., President.

W. H. Dudley, M. D., Treasurer.

C. L. Mitchell, M. D., Secretary.

George Marvin, M. D.

*Faculty of the College.*

Samuel G. Armor, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine.

Corydon L. Ford, M. D., Professor of Anatomy.

Edward S. Dunster, M. D., Professor of Obstetrics and Diseases of Children.

George W. Plympton, A. M., Professor of Chemistry and Toxicology.

Alexander J. C. Skene, M. D., Professor of the Medical and Surgical Diseases of Women, and Clinical Obstetrics.

Jarvis S. Wight, M. D., Professor of Materia Medica and Therapeutics.

Alpheus B. Crosby, M. D., Professor of Surgery.

Henry S. Cheever, M. D., Professor of Physiology and Microscopic Anatomy.

George K. Smith, M. D., Adjunct Professor of Anatomy.

J. S. Prout, M. D., Lecturer on Diseases of the Eye.

Arthur Mathewson, M. D., Lecturer on Diseases of the Ear.

William A. Bates, M. D., Demonstrator of Anatomy.

Lewis D. Mason, M. D., Assistant to the Chair of Surgery.

William Wallace, M. D., Assistant to the Chair of Practice.

George Rankin White, M. D., Assistant to the Chair of Diseases of Females, etc.

James Watt, M. D., Assistant to the Chair of Obstetrics, etc.  
 William H. Bullard, M. D., Microscopist.  
 Joseph H. Raymond, M. D., Assistant to the Chair of Physiology.  
 B. A. Segur, M. D., Curator of Museum.  
 Henry Williams, Janitor.

### 3. NUMBER OF STUDENTS.

The whole number of students attending the regular course of instruction during said year was ninety-two.

The whole number of graduates at the last annual Commencement, on the 25th day of June, 1872, was thirty-seven. The average age of the graduates at this Commencement was probably twenty-five.

### 4. CLASSIFICATION OF STUDENTS.

Number of first course students .....	27
Number of second course students.....	36
Number of third course students.....	26
Number of fourth course students.....	3
Number of graduates in medicine.....	0
	<hr/>
	92
	<hr/>

### 5. COLLEGE TERMS OR SESSIONS.

Term of Lectures from March 5th to June 25th.

### 6. MODE OF INSTRUCTION.

The general mode of instruction remains as before, but much more time is given to clinical teaching, as the increasing number of patients attending at the dispensary connected with the hospital very much augments the facilities for this mode of instruction.

### 7. DISCIPLINE.

As before.

### 8. BY-LAWS OF THE COLLEGE.

Nothing to report under this head.

### 9. DESCRIPTION AND VALUE OF COLLEGE BUILDINGS.

Same as at last report.

### 10. COLLEGE PROPERTY.

No other property, aside from the real estate of the corporation.

11. DEBT.

None.

12. REVENUE.

1. Matriculation fees .....	\$455 00
2. Graduation fees .....	925 00
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	\$1,380 00
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*Revenue to the College Faculty.*

Tickets .....	\$5,255 00
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13. EXPENSES.

Incidental expenses .....	\$1,385 73
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14. EXAMINATION AND GRADUATION.

Same as in last report.

C. L. MITCHELL, M. D.,  
*Secretary.*

XXIX. HOMŒOPATHIC MEDICAL COLLEGE OF THE  
STATE OF NEW YORK, IN THE CITY OF NEW YORK.

*To the Regents of the University of the State of New York:*

The Trustees and Faculty of the New York Homœopathic Medical College respectfully present, through the Dean of the Faculty, the following report for the year 1872:

TRUSTEES.

S. H. Wales, President.

Edmund Dwight, Vice-President.

George W. Clark, Secretary.

H. N. Twombly, Treasurer.

A. O. Hall, William Degroot, James W. Smith, Hiram Calkins, William H. Raynor, T. C. Smith, D. D. T. Marshall, James A. Robinson, John D. Van Buren, D. L. Pettie, Charles P. Frame, B. S. Walcott, George S. Lake, Alexander Wilder, B. F. Joslin, M. D.; L. Hallock, M. D.

The annual meeting of the Trustees takes place on the last Saturday of February in each year.

FACULTY.

William Tod Helmuth, M. D., Professor of Surgery.

H. D. Paine, M. D., Professor of Institutes of Medicine.

J. W. Dowling, M. D., F. S. Bradford, M. D., Professors of Theory and Practice of Medicine.

Carrol Dunham, M. D., T. F. Allen, M. D., Professors of Materia Medica and Therapeutics.

S. P. Burdick, M. D., Professor of Obstetrics.

S. Lilienthal, M. D., Professor of Clinical Medicine.

E. M. Kellogg, M. D., Emeritus Professor of Diseases of Women.

C. A. Bacon, M. D., Professor of Histology.

Adrian J. Ebel, Ph. D., M. D., Professor of Physiology.

Wm. O. McDonald, M. D., Professor of Diseases of Women.

Chas. Avery, LL. D., Professor of Chemistry.

R. H. Lyon, M. D., Professor of Medical Jurisprudence.

H. M. Jernegan, M. D., Prosector of Surgery.

James A. Carmichael, M. D., Professor of Anatomy.

T. D. Bradford, M. D., Demonstrator of Anatomy.  
Enos Hall, Janitor.

The number of students during the session of 1872 was 103. The number of graduates, thirty-five.

No changes have been made in the mode of instruction, except that a graded course, covering three years of study, and involving a selection of topics of study, according to the proficiency of the student, has been tried and found to operate satisfactorily, and is strongly urged upon students, until the laws of the State of New York, establishing a course of study for candidates for the degree of Doctor of Medicine, shall be modified. At present it is required that each student shall attend "two complete courses of lectures;" a complete course is defined as embracing lectures upon Anatomy, Physiology, Chemistry, Surgery, Practice of Medicine, Materia Medica and Obstetrics. It is obvious that the beginner cannot advantageously study Surgery, Obstetrics and Practice of Medicine, until he shall have mastered Anatomy, Physiology and the rudiments of Chemistry. A part, therefore, of his obligatory attendance upon lectures, during his first term, is time thrown away. The present method enjoined by law is much as though a student in our literary colleges was obliged, for four successive years, to attend the full series of lectures, listening to explanations of Conic Sections and the Calculus, for example, before he had become familiar with Algebra and Geometry. A modification of the laws on this subject is greatly to be desired in the interests of medical education. The College, during the last session, occupied and will continue to occupy apartments fitted up for it, under a long lease, in the building of the New York Ophthalmic Hospital, corner of Third avenue and Twenty-third street, New York.

The revenue of the College is derived solely from tuition fees paid by the students. The professors give their services gratuitously.

The regulations and terms remain as at the last report.

J. W. DOWLING, M. D.,  
*Acting Dean and Registrar.*

### XXX. NEW YORK MEDICAL COLLEGE AND HOSPITAL FOR WOMEN, NEW YORK CITY.

*To the Regents of the University of the State of New York :*

The Trustees of the New York Medical College and Hospital for Women, in compliance with the requisition of the Regents of the University, submit the following report for the last collegiate year, ending on the 30th day of September, 1872, containing a just and true statement of facts, showing the progress and condition of said college, during and at the close of said year, in respect to the several subject-matters following, viz. :

#### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The professorships in said College during said year, as established by the Trustees, were the following :

1. Principles and Practice of Surgery.
2. Physiology.
3. Anatomy.
4. Chemistry.
5. Principles and Practice of Medicine.
6. Obstetrics.
7. Diseases of Women and Children.
8. Materia Medica and Therapeutics.
9. Medical Jurisprudence.
10. Histology.

#### 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The following is a list of the Trustees of the College, and their respective places of residence :

Mrs. R. B. Connolly, President, New York.

“ Edward Bayard, Vice-President, New York.

“ David Ely, Treasurer, New York.

“ K. H. Browning, Recording Secretary, Orange, N. J.

“ C. Fowler Wells, Corresponding Secretary, New York.

“ A. C. L. Botta, New York.

“ F. G. Blinn, Cambridge, N. Y.

“ S. Cutter, New York.

“ V. C. King, Peekskill, N. Y.



- Mrs. Wm. H. Greenough, New York.
- “ E. A. Lane, New York.
- “ D. E. Sackett, New York.
- “ D. N. Ropes, Orange, N. J.
- “ J. W. White, New York.
- “ L. T. Warner, New York.
- “ L. M. Ward, New York.
- “ G. E. Vanderburgh, New Rochelle, N. Y.

The Faculty of said College, including all persons charged with the duty of giving public instruction therein, during said year, consisted of a President, Dean, ten Professors, one Lecturer, and a Demonstrator in Anatomy.

The other officers or servants of said College, charged with duties therein other than those of public instruction, during said year, were :

1st. A resident trustee. 2d. A resident physician. 3d. A visiting physician. 4th. Nurses. 5th. House servants. 6th. A janitor.

The names of the several persons holding offices or places in said College, during said year, with the offices or places held by them respectively, and the salaries or annual compensation for official services allowed to each of them, were as follows :

NAMES OF PERSONS.	Professorship or other Offices held.	Salary.
Mrs. C. S. Lozier, M. D.....	Emeritus Prof. Dis. of Women, and Dean.....	
Mrs. F. E. Doughty, M. D.....	Professor of Surgery.....	\$250.
Mrs. J. C. Minor, M. D.....	Professor of Clinical Surgery.....	
Mrs. H. C. Houghton, M. D.....	Professor of Physiology.....	250.
Mrs. F. S. Bradford, M. D.....	Professor of Principle and Practice of Med.....	
Mrs. Samuel Lillenthal, M. D.....	Professor of Clinical Medicine.....	250.
Mrs. Sarah E. Furnas, M. D.....	Professor of Obstetrics and Anatomy.....	450.
Mrs. E. M. Kellogg, M. D.....	Professor of Diseases of Women and Children...	250.
Mrs. T. F. Allen, M. D.....	Professor of Materia Medica and Therapeutics..	250.
Mrs. Charles S. Stone, A. M.....	Professor of Chemistry.....	250.
Mrs. B. D. Penfield, A. M.....	Professor of Medical Jurisprudence.....	
Mrs. A. W. Lozier, M. D.....	Professor of Histology (Lec.).....	
Mrs. Mary H. Everett, M. D.....	Demonstrator in Anatomy.....	Fees.
Mrs. D. E. Sackett.....	Resident Trustee.....	
Mrs. Rebecca P. Page.....	Resident Physician.....	

3. NUMBER OF STUDENTS.

The whole number of students attending the regular course of instruction, during said year, was thirty-three.

The number of graduates at the last annual Commencement, held March 21, 1872, was eight.

The whole number of graduates in medicine is sixty-five.

The ages of the graduates being required by law to be twenty-one years, none have been admitted to the degree under that age. The average age of the graduates at the last Commencement was thirty-four years.

## 4. CLASSIFICATION OF STUDENTS.

The students attending said College are classified as follows :

Number attending their first course of lectures . . . . .	16
Number attending their second course of lectures . . . . .	9
Number attending their third course of lectures . . . . .	<u>8</u>

## 5. COLLEGE TERM OR SESSION.

The terms or sessions for study in said College during said year were the following : 1st. A winter session, commencing October 15, 1872, and continuing twenty-two weeks. 2d. A spring term of five weeks, commencing April 1, 1872.

The next College term or session will commence October 16th, 1873, and close March 25th, 1874.

## 6. MODE OF INSTRUCTION.

The Professors lecture on topics embraced in their several departments of instruction.

The students take notes, and are examined from day to day to ascertain their knowledge of the subjects of the lectures. Recitations upon assigned topics are also included in the process of instruction. They attend an average of five lectures or recitations a day.

## 7. DISCIPLINE.

The students are of mature age, and afford no occasion for the exercise of discipline. There is no discrimination made as to the relative merits of students, either in respect to scholarship or deportment.

## 8. GRATUITOUS AID.

The College has no fund especially appropriated to the education of indigent students, but has one endowed scholarship, to which it is hoped others will be added. Fourteen were educated wholly or in part gratuitously.

## 9. STATUTES OR BY-LAWS OF THE COLLEGE.

The by-laws hitherto reported were in force during the past year.

## 10. EXAMINATION AND GRADUATION.

The conditions for admission are those required by law. Candidates for the degree are examined by the professors individually, and, if sustained by the vote of the Faculty, are then examined by the

Censors, not members of the Faculty, and if approved by a four-fifth vote of this board, they are recommended to the Trustees for graduation and receive their diplomas. The examinations are both oral and written.

#### 11. DESCRIPTION AND VALUE OF BUILDINGS, ETC.

The property heretofore described, situate on the corner of Twelfth street and Second avenue, is owned by the Trustees, and is used for the purposes of the College and Hospital; it is valued at fifty thousand dollars (\$50,000).

The library numbers about 150 volumes in good condition.

The College has a small chemical and philosophical apparatus, with plates and models, etc., for illustration in the several departments of instruction, valued at four thousand dollars (\$4,000). Total amount of the above, fifty-four thousand dollars (\$54,000).

#### 12. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

Furniture.....	\$2,000 00
Cash in treasury.....	12,096 97
Notes and subscriptions considered good.....	5,000 00
Total.....	<u><u>\$19,096 97</u></u>

#### 13. DEBTS.

The College is free from debt.

#### 14. REVENUE.

1. The amount collected during said year on account of matriculation fees.....	\$150 00
Graduation fees, (none).	
2. Interest on deposits.....	730 00
3. From students for course of lectures.....	870 00
From the State, under chapter      Laws of 1871,	901 14
Total amount of revenue.....	<u><u>\$2,651 14</u></u>

#### 15. EXPENDITURES.

Improvement and repairs of College property .....	\$912 00
For salaries of Professors and Janitor.....	2,100 00
Expenses not included in the above .....	1,254 73
Total amount of expenditures.....	<u><u>\$4,266 73</u></u>

16. FEES.

Matriculation fees.....	\$5 00
Demonstration fees.....	5 00
Full course of lectures.....	70 00

17. TABULAR STATEMENT.

Number of Professors .....	11
Number of Lecturers, etc .....	2
Number of students during the last year.....	33
Number of graduates during the last year.....	8
Whole number of graduates.....	65
Value of College buildings and grounds .....	\$50,000 00
Value of library and apparatus .....	4,000 00
Amount of matriculation fees received during the last year .....	150 00
Amount of graduation fees received during the last year. None.	
Total revenue during the year.....	2,651 14

18. REMARKS.

The report covers the receipts of the College and Hospital, excepting income from a portion of the patients, which offsets pay of house, servants and nurses.

The departments are so blended that they cannot be separated in the statement of expenditures.

The Hospital is considered as a part of the College, as its leading design is to furnish clinical instruction.

The Trustees hope to be able, within the coming year, to make arrangements for placing the institution on a basis more favorable to permanence and to greatly increased usefulness.

19. CLOSE OF REPORT.

At a regular meeting of the Trustees, held on the 5th day of November, a committee was appointed to make the annual report.

This report, as thus ordered and prepared, is respectfully submitted in behalf of the Trustees by

[L. S.]

D. E. SACKETT,  
CAROLINE D. ELY,  
*Committee.*

## XXXI. ECLECTIC MEDICAL COLLEGE, NEW YORK CITY.

*To the Regents of the University of the State of New York :*

The Trustees of the Eclectic Medical College of the city of New York, in compliance with the requisition of the Regents of the University, submit the following report for the last collegiate year, ending the first day of June, 1872, containing a just and true statement of facts showing the progress and condition of said College, during and at the close of said year, in respect to the several subject-matters following, viz. :

## 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The Professorships in said College during said year, as established by the Trustees, were the following :

1. Anatomy.
2. Physiology and Pathology.
3. Operative Surgery and Surgical Diseases.
4. Theory and Practice of Medicine.
5. Materia Medica, Therapeutics and Pharmacy.
6. Obstetrics and Diseases of Women and Children.
7. Chemistry and Toxicology.
8. Medical Jurisprudence.

## 2. TRUSTEES, FACULTY AND OTHER COLLEGE OFFICERS.

The following are the names and residences of the Trustees of said College :

- Alexander Wilder, M. D., New York city.  
Henry L. Stuart, Esq., New York city.  
John F. Cleveland, Esq., New York city.  
Robert S. Newton, M. D., New York city.  
P. Albert Morrow, M. D., New York city.  
Dennis E. Smith, M. D., Brooklyn, N. Y.  
Horatio E. Firth, M. D., Brooklyn, N. Y.  
Frank Tabor, Esq., Brooklyn, N. Y.  
William Jones, M. D., Newburgh, N. Y.  
Samuel Tuthill, M. D., Poughkeepsie, N. Y.  
William Moller, Esq., New York city.  
C. B. Wheeler, Esq., New York city.

Herman Boskowitz, M. D., Brooklyn, N. Y.

H. D. Lapangh, Esq., New York city.

I. Powers, Brooklyn, N. Y.

Charles P. Sykes, Esq., New York city.

Samuel Sinclair, Esq., New York city.

*Censors.*

Dennis E. Smith, M. D.,

Alexander Wilder, M. D.,

Samuel Tuthill, M. D.,

P. Albert Morrow, M. D.,

Horatio E. Firth, M. D.

The Faculty of said College, including all persons charged with the duty of giving public instruction therein during said year, consisted of a President, eight Professors and a Demonstrator of Anatomy. The other officers or servants of said College, charged with duties therein other than those of public instruction during said year, are a Vice-President, Treasurer, Corresponding Secretary, Recording Secretary and Board of Censors.

The names of the several persons holding offices or places in said College during said year, with the offices or places held by them respectively, and the salaries or annual compensation for official services allowed to each of them, were as follows:

*Faculty.*

Robert S. Newton, M. D., Professor of Surgery and Surgical Diseases. Fees.

Paul W. Allen, M. D., Professor of Theory and Practice of Medicine. Fees.

E. S. McClellan, M. D., Professor of Materia Medica, Therapeutics and Pharmacy. Fees.

V. A. Baker, M. D., Professor of Obstetrics and Diseases of Women and Children. Fees.

R. A. Gunn, M. D., Professor of Descriptive and Surgical Anatomy and Operative Surgery.

J. M. F. Browne, M. D., LL. D., Professor of Physiology and Pathology. Fees.

J. Milton Sanders, M. D., LL. D., Emeritus Professor of Chemistry. Fees.

F. S. Glover, Esq., Professor of Medical Jurisprudence. Salary, none.

John C. Spray, M. D., Demonstrator of Anatomy. Fees.

B. Stocton, M. D., Garnett-Professor of Chemistry.

3. NUMBER OF STUDENTS.

The whole number of students attending the regular course of instruction, during said year, was seventy-five. The number of graduates at the last annual Commencement, held in February, 1872, was sixteen. The whole number of graduates is one hundred and forty-nine.

The ages of the graduates being required by law to be twenty-one years, none have been admitted to the degree under that age. The average age of the graduates at the last Commencement was twenty-eight years.

4. CLASSIFICATION OF STUDENTS.

The students attending said College are classified as follows :

Number attending their first course of lectures.....	40
Number attending their second course of lectures.....	30
Number attending their third course of lectures .....	5
	<hr/>
	75
	<hr/>

5. COLLEGE TERM OR SESSION.

The term or session of said College, during said year, began on the 12th day of October, 1872, and continued eighteen weeks.

6. MODE OF INSTRUCTION.

The various Professors deliver lectures on the subjects assigned them, which are amply illustrated, so that the student may fully understand the same. The students are examined frequently, in order to ascertain the progress they are making. The principal test for scholarship is the final examination for the degree of Doctor of Medicine.

The students are required to attend five lectures a day, in addition to which there are from three to five cliniques a week.

7. DISCIPLINE.

There was no case requiring discipline during the year.

8. GRATUITOUS.

There is no provision made for the gratuitous education of indigent students.

9. STATUTES AND BY-LAWS OF THE COLLEGE.

The annual meeting was held on the 28th of May, 1872.

The following Trustees were present at this meeting: Messrs. Wilder, Smith, Stowe, Stuart, Sykes, Wheeler, Firth, Tuttle, Newton and Jones.

A copy of the statutes and by-laws of the College has been furnished to the Board of Regents heretofore.

A perfect compliance with every statute regulating said College has been observed in the conferring of said degrees.

The following is a complete list of the names of every person who has graduated in said College from its organization to the close of the session in 1871 and 1872:

NAMES OF THE GRADUATES OF THIS COLLEGE FROM ITS COMMENCEMENT IN 1866 TO DATE.

1867.

Bricker, John, Iowa.	Merwin, William R., Missouri.
Conway, John, Iowa.	Millington, Edwin H., New York.
Dolley, Charles W., Michigan.	Morris, James A., New Jersey.
Hayden, Wm. R., New York.	Mix, J. B., New York.
Hayden, Maria B., New York.	Pratt, H. H., New York.
Morrow, P. Albert, Kentucky.	

*Ad eundem.*

Boskowitz, Herman, New York.	Prettyman, John S., Delaware.
Firth, H. E., New York.	Smith, Dennis E., New York.
Henshall, James A., Wisconsin.	Stow, B. J., New York.
Jackson, Joseph, Mass.	Sweet, Hill, New York.
Miles, Edwin C., Mass.	Wilcox, David, New York.

1868.

Andrews, E. B., New York.	Firth, Lamson B., New York.
Bogart, D. P., Canada.	Fitch, John H., New York.
Battleson, George, New York.	Geddes, William, Mass.
Belknap, M. C., New York.	Harvey, Elias, New York.
Comins, James M., New York.	Kunze, R. E., New York.
Cooper, Henry C., New York.	Lamb, George, New Brunswick.
Callahan, Dennis, Ohio.	Norton, H. L., Kentucky.
Danelson, James E., New York.	Nivison, A. T., New York.
Day, James, New York.	Simons, O. H., New York.
Danelson, Edwin J., New York.	Teed, Samuel R., New York.



*Ad eundem.*

Bowlsly, William H., New York.	Hamilton, C. T., New York.
Browne, J. M. F., New York.	Huyler, Edward P., New York.
Gunning, J. H., New York.	Jamieson, John, New York.

*Honorary.*

Fishblatt, E., New York.	Skelton, John, England.
Plumbe, E. O., New York.	Tottman, Calvin S., New York.
Stanton, Lymon, New York.	

1869.

Allen, William A., New York.	Linguist, M. F., New York.
Archer, Charles H., New York.	Miller, Isaac S., New York.
Archer, Mrs. H. E., New York.	Ostrander, Mrs. Z., New York.
Archer, William, New York.	Roe, Sylvester, Jr., New York.
Berry, T. C. S., Maine.	Shattuck, L. A., Maine.
Brown, Mrs. E. A., Mass.	Smith, Willis J., New York.
Chapman, Benj. F., New York.	Starr, George O., New York.
Cheesbrough, Wm. D., New York.	Sweet, Homer L., N. Hampshire.

*Ad eundem.*

Dewitt, E. W., Arkansas.	Jones, William, New York.
Geddes, R. W., Mass.	Perkins, T. S., Mass.
Crane, Oliver, Penn.	McCartney, John, Ireland.
Hyde, John J., New York.	Tuthill, Samuel, New York.

1870.

Barker, William, New York.	Mason, James J., New York.
Bronson, Charles H., New York.	Miller, Margaret A., New Jersey.
Dewey, Mary E., New York.	Phelps, Louisa J., New York.
Goodspeed, Helen A., Conn.	Rockwell, John M., Conn.
Hathaway, Maria, New York.	Smith, Le Roy A., Conn.
Jackson, J. W. C., Mass.	Smith, Louise M., New York.
Kelly, Peter, New York.	Van Kirk, Harriet P., New York.

*Ad eundem.*

Eaton, Edward Byron, China.	Myers, Jules de, New Jersey.
Horton, John, New York,	Sprague, Romulus C., Ill.
Jacobson, Adolphus E., New York.	Wolff, Gabriel J., New York.

*Honorary.*

Brown, D. J., A. M., Miss.	Merkel, G. H., Mass.
Dunkley, Wm. W., Liverpool, Eng.	Webb, Edward L., London, Eng.
Highett, Charles, London, Eng.	

1871.

Aisbett, Matthew S., Penn.	Jewett, Nathaniel, Mass.
Bishop, Midas E., New York.	Morgan, Elihu, Mass.
Chase, George W., Mass.	Prankard, William, New York.
Dickens, J. B. M., Mass.	Parks, Mariah J., Indiana.
Firth, Elizabeth, New York.	Ripley, Edwin, Conn.
Griffith, Joseph, New Jersey.	Ricker, Joseph T., Ohio.
Gordon, Edward S., N. Carolina.	Simms, Joseph, New York.
Hynan, Peter, New York.	

*Ad eundem.*

Aspinall, William, England.	Preston, E. S., New York.
Bailey, Robert L., England.	Sohl, Henricus, Mass.
Davidson, Samuel, New York.	Smythe, Wesley Samuel, Mass.
Lamb, George, England.	Smyth, Wm. T. Y., England.
Lewis, William, England.	

*Honorary.*

Carpenter, George W., New York.	Johnson, W. S., Vermont.
Clark, Samuel, Ill.	Morehouse, E. M., Minnesota.
Fox, Albert, New York.	Price, Clarence V., Ill.
Jacques, Joseph, New York.	Sharp, James J., New York.

1872.

Pratt, Seraphina, Conn.	Ralston, Anna, Conn.
Rich, Francis M., New York.	Gaudern, Richard, Ohio.
Davis, Eber E., New York.	Young, Wm. H. A., Vermont.
Cady, Harriet E., New York.	De Baun, Alice, New Jersey.
Lacy, Mary L. W., New York.	Ensign, Jennie, New York.

*Honorary.*

Goodell, J. R., Rhode Island.	Jordan, Philip J., Philadelphia.
Brooks, Abel D., New York.	Jordan, Lewis J., New York.

*Ad eundem.*

Fitzgerald, A., M. D., F. R. C. S., London, England.	Adams, Henry, M. D., L. R. C. P., London, England.
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*Recapitulation.*

Arkansas .....	1	Michigan .....	1
Canada .....	1	Missouri .....	1
China .....	1	New York.....	82
Connecticut .....	6	New Jersey.....	5
Delaware .....	1	New Hampshire .....	1
England .....	11	New Brunswick .....	1
Illinois .....	3	North Carolina .....	1
Indiana.....	1	Ohio .....	3
Ireland .....	1	Pennsylvania.....	3
Iowa .....	2	Vermont .....	2
Kentucky .....	2	Wisconsin .....	1
Massachusetts .....	13	Rhode Island .....	1
Maine .....	2		
Mississippi .....	1	Whole number .....	149
Minnesota .....	1		

## 10. EXAMINATION AND GRADUATION.

Candidates for the degree of Doctor of Medicine must present satisfactory evidence that they have attained the age of twenty-one years, and are of good moral character; they must have studied medicine three years with some respectable practitioner, and have attended two full courses of lectures in some legally incorporated college, the last of which shall have been attended in this College, or they must have been engaged in a constant and reputable practice of medicine for four years, and have attended one full course of lectures in this College.

It also confers the degree of Ad Eundem and Honorary. The examination is made by the individual members of the Faculty. The Faculty then report the names of such persons as they consider qualified to receive the degree of Doctor of Medicine to the Board of Censors. Said Board is composed of Physicians who are neither members of the Faculty nor teachers of said College. The Board of Censors report the result of their examination to the Board of Trustees of said College, who then, in concurrence with the Board of Censors, confer the degree.

## 11. DESCRIPTION AND VALUE OF BUILDINGS.

The College building is under a lease to the College. It is situated on the north side of East Twenty-sixth street, No. 223, between

Second and Third avenues. This building is twenty-five feet front by seventy-five feet in depth and is two stories high. The lower story is occupied by the Eclectic Medical Dispensary. The upper part of this building contains all the requisite accommodations for students in the different departments of instruction. The College possesses a Cabinet of Materia Medica. Anatomical and Pathological plates and cabinets for illustration, including the Chemical Laboratory and other personal property connected with the same, valued at about \$5,000. This College also owns (20) twenty building lots in the city of Breslan, Long Island, valued at about \$6,000.

12. DEBTS.

There are no debts of any kind to date.

13. REVENUE.

Amount collected from matriculation.....	\$250 00
Amount collected from graduation .....	480 00
	<hr/>
	\$730 00
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14. EXPENDITURES.

Incidental expenses for the session .....	\$578 00
	<hr/>

15. FEES.

Fee for a full course of lectures.....	\$100 00
Matriculation fee .....	5 00
Demonstrator's fee.....	5 00
Graduation fee .....	30 00
Hospital tickets .....	3 00
For certificate of scholarship, for which the holder may attend two or more courses of lectures, or until graduation, to be paid in advance.....	150 00
For certificate of scholarship, entitling the holder to keep a student in the College for ten years.....	500 00
For certificate of scholarship, entitling the holder to keep a student in the College perpetually.....	1,000 00
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16. TABULAR STATEMENT.

Number of Professors.....	7
Number of lectures .....	540

Number of students during the last year. . . . .	75
Number of graduates during the last year. . . . .	16
Value of library and apparatus . . . . .	\$400 00
Amount of matriculation fees received during the last year, . . . . .	250 00
Amount of graduation fees received during the last year. . . . .	480 00
Total revenue during the year . . . . .	730 00
Total expenditure during year. . . . .	730 00

## 17. REMARKS.

The Trustees and Professors of the Eclectic Medical College of the city of New York take pleasure in assuring the friends of the institution that it has thus far successfully maintained its professional standing and reputation. Eight sessions have been held. The previous classes have been composed of students possessing superior ability and talent; and those who have taken the degree of the College have displayed, in the pursuit of their profession, that knowledge, energy and sagacity which are the pioneers of success.

The facilities for medical education in New York city are not readily surpassed in any other place in this country; for we have here access to extensive and well-conducted hospitals and dispensaries, which afford to our students full opportunity to scrutinize the modes of treatment employed, as well as to observe the great variety of diseases, and to compare the success of the treatment with that of the Eclectic mode of practice. These advantages are not presented in any other place, and are great inducements for them to select it, aside from the advantages to be enjoyed in our College or other institutions.

We cannot, therefore, speak too highly of the advantages here offered to students of medicine. The expense attending their course of instruction here is no greater than in any other city, and bears no comparison to the advantages to be enjoyed.

The principles of medicine inculcated in this College are denominated Eclectic. The student is taught that the investigation of the science and the practice of medicine should be full, free and untrammelled; that independent thought, study and research are the birth-right of every one, and that every educated physician of correct deportment should be treated with fraternal and professional courtesy.

The name Eclectic is adopted, as signifying more clearly than any other the views which we entertain—gathering medical knowledge

from every available source, with the view to select the good and reject the useless and pernicious. It is the most appropriate, because of the fact that American medical reform owes its existence to an eclectic freedom of investigation; a departure from the dogmas of the schools, and an eclectic research into nature, and in the results of various clinical experience by all classes of observers. The researches have not resulted in mere accumulation of materials, but, in addition, the introduction of a great number of new and superior remedies, the discarding of a number of dangerous and poisonous agents, for which more efficient and at the same time perfectly safe substitutes have been obtained, and a great and comprehensive system of safe and rational practice has been organized upon the basis of the widest and most enlightened practical experience. We claim and insist on the credit due to us for the discovery, proving and adoption of many new and important remedies obtained from indigenous medicinal plants, and of a mode of separating from the crude material the active medicinal principle, thus reducing the dose to the smallest quantity, and rendering it usually more acceptable to the patient.

A distinctive and fundamental principle of the Eclectic school of medicine is, that no agent should be used or treatment pursued that impairs the vital powers. Remedies that act in accordance with physiological laws, should always be sought and employed. The fancied necessity for the employment of dangerous medicinal agencies is a delusion. The terrible consequences often following their use is a sufficient refutation of the plea that they are required, as all necessary purposes can be effected by remedies more harmless as well as efficacious; consequently, we do not sanction the use of mercurials, lead, arsenic and antimony, or the use of the lancet.

#### 18. CLOSE OF REPORT.

This report is made in accordance with a resolution, and signed as directed by the Board of Trustees, to which the seal of the institution is affixed.

ALEXANDER WILDER,

*President Board of Trustees.*

[L. S.]

ROBERT S. NEWTON, M. D.,

*Secretary Board of Trustees.*

NEW YORK, Sept. 1, 1872.

## XXXII. NEW YORK COLLEGE OF DENTISTRY, NEW YORK CITY.

*To the Regents of the University of the State of New York :*

The Trustees of the New York College of Dentistry, in compliance with a requisition of the Regents of the University, submit the following report for the last collegiate year, ending on the 4th day of March, 1872, containing a just and true statement of facts showing the progress and condition of said College, during and at the close of said year, in respect to the several subject-matters following, viz. :

### 1. NUMBER AND DESCRIPTION OF PROFESSORSHIPS.

The Professorships in said College during said year, as established by the Trustees, were the following :

#### *Faculty.*

Willian H. Allen, Emeritus Professor of the Institutes of Dentistry.

Faneuil D. Weisse, M. D., Professor of Regional Anatomy and General Pathology.

Frank Abbott, M. D., Professor of Operative Dentistry and Oral Surgery.

Alex. W. Stein, M. D., Professor of Histology, Visceral Anatomy and Physiology.

F. Le Roy Satterlee, M. D., Ph. D., Professor of Chemistry, Materia Medica and Therapeutics.

C. A. Woodward, D. D. S., Professor of Mechanical Dentistry.

D. W. Williamson, D. D. S., Demonstrator of Operative Dentistry.

J. Bond Littig, D. D. S., Demonstrator of Mechanical Dentistry.

C. F. W. Bodecker, D. D. S., Assistant to the Professor of Chemistry, Materia Medica and Therapeutics.

Frank Abbott, M. D., Dean of the Faculty, 78 West Twelfth street, New York.

### 2. TRUSTEES AND OTHER COLLEGE OFFICERS.

The following are the names and residences of the Trustees of said College :

S. A. Main, President, 23 West Twenty-third street, New York city.

Wm. H. Allen, Vice-President, 18 West Eleventh street, New York city.

Alex. W. Stein, M. D., Treasurer, 28 West Fifteenth street, New York city.

M. McN. Walsh, Secretary, 21 Park row, New York city.

N. W. Kingsley, 25 West Twenty-seventh street, New York city.

W. B. Roberts, Titusville, Pa.

F. D. Weisse, M. D., 51 West Twenty-second street, New York city.

A. E. Schermerhorn, 20 East Twenty-third street, New York city.

Frank Abbott, M. D., 78 West Twelfth street, New York city.

F. Le Roy Satterlee, M. D., 42 West Twenty-first street, New York city.

C. A. Woodward, D. D. S., 9 East Seventeenth street, New York city.

B. F. Batchelder, 23 West Twenty-third street, New York city.

John H. Anthon, 271 Broadway, New York city.

The Faculty of said College during said year has already been given. The other officers of said College were connected with the College Infirmary, as follows:

#### INFIRMARY OF THE NEW YORK COLLEGE OF DENTISTRY.

Prof. Frank Abbott, M. D., Superintendent.

Prof. James R. Wood, M. D., Consulting Surgeon.

Prof. Faneuil D. Weisse, M. D., Attending Surgeon.

#### *Board of Consulting Dentists and Clinical Lecturers.*

Wm. H. Allen, New York.

J. T. Metcalf, New York.

B. F. Batchelder, New York.

W. B. Roberts, Titusville, Pa.

Wm. T. La Roche, New York.

S. L. Close, New York.

S. A. Main, New York.

Geo. Bernard, D. D. S., New York.

Wm. Carr, M. D., D. D. S., N. Y.

Geo. S. Allan, D. D. S., New York.

Each Professor received for his services during the year two hundred dollars.

#### 3. NUMBER OF STUDENTS.

The whole number of students attending the regular course of instruction during said year was thirty-four (34). The number of graduates at the last annual Commencement, held on the 4th day of March, 1872, was twelve (12). The whole number of graduates in Dental Surgery is fifty-eight (58).



The ages of the graduates being required by law to be twenty-one years, none have been admitted to the degree under that age. The average age of the graduates at the last Commencement was twenty-five (25) years.

#### 4. CLASSIFICATION OF STUDENTS.

The students attending said College are classified as follows:

Number attending their first course of lectures .....	21
Number attending their second course of lectures .....	10
Number attending their third course of lectures .....	3
	<hr/>
	34
	<hr/>

#### 5. COLLEGE TERM OR SESSION.

The term or session for study and practice in said College during said year was the following:

1. Infirmary Course for practice in Dentistry, from April 6th to October 16th.

2. Winter session of daily lectures and cliniques, from October 16th, 1871, to March 4th, 1872.

The next Infirmary Course commences April 4th, 1872, and the winter session of daily lectures and cliniques will commence October 14th, 1872.

#### 6. MODE OF INSTRUCTION.

The mode of instruction pursued in said College during the past year was the same as stated in the annual reports for former years.

#### 7. DISCIPLINE.

The regulations of the College require gentlemanly deportment from the students, under pain of expulsion.

The Faculty Prize of a set of instruments, valued at one hundred dollars, was awarded to the graduate who passed the examinations most creditably.

#### 8. GRATUITOUS AID.

No students during the past year were educated gratuitously, in whole or in part.

#### 9. STATUTES AND BY-LAWS.

The same as forwarded in former report.

## 10. EXAMINATIONS AND GRADUATION.

The examinations for graduation were the same in all respects as those had last year and reported in the last annual report. The examinations are, if anything, more extended and thorough each succeeding year, as it is the intention to keep up the standard of the graduates to the highest point attained by the most progressive of the profession.

## 11. DESCRIPTION AND VALUE OF COLLEGE BUILDINGS.

The same as stated in former report.

## 12. DESCRIPTION AND VALUE OF OTHER COLLEGE PROPERTY.

The same as stated in former report.

## 13. DEBTS.

The whole amount of debts contracted by the Trustees of the College, now unpaid, is \$1,500; no part of which indebtedness was contracted during the last year.

## 14. REVENUE.

Amount collected, or considered collectible, during said	
year, on account of tuition fees, was.....	\$3,533 00
On account of Infirmary .....	1,449 21
On account of donations .....	4,750 00
Total .....	<u>\$9,732 21</u>

## 15. EXPENDITURES.

Amount paid or payable on liabilities incurred during said year on the following accounts:

Rent of College and Infirmary .....	\$2,250 00
College expenses .....	2,555 41
Infirmary expenses .....	4,926 80
	<u>\$9,732 21</u>

## 16. FEES.

One fee of one hundred and fifty dollars for each year's attendance.

## 17. TABULAR STATEMENT.

Number of Professors.....	6
Number of lectures .....	300
Number of students during the last year.....	34
Number of graduates during the last year.....	12
Whole number of graduates.....	58

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Value of apparatus.....	\$3,300 00
Total revenue during the year .....	9,732 21
Total expenditures .....	9,732 21
Amount of debt of the College .....	1,500 00

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## 18. REMARKS.

The indebtedness of the College is due to the Trustees, they having advanced the money as it was required, from time to time, to meet the expenses of the College.

The members of the Board who were present at the making of this report and the adoption thereof are as follows: Dr. S. A. Main, Dr. Frank Abbott, Dr. Alex. W. Stein, Dr. F. D. Weisse, Dr. B. F. Batchelder, Alfred Schermerhorn, Esq., and M. McN. Walsh.

## 19. CLOSE OF REPORT.

Made by the Board of Trustees of the New York College of Dentistry, at a special meeting of said Board, held on the 18th day of December, 1872, and respectfully submitted for and in their behalf.

STEPHEN A. MAIN, *President*.

M. McN. WALSH, *Secretary*.

[L. S.]

XXXIII. RENSSELAER POLYTECHNIC INSTITUTE,  
TROY, RENSSELAER COUNTY.

XXXIV. WOMEN'S MEDICAL COLLEGE OF THE NEW  
YORK INFIRMARY FOR WOMEN AND CHILDREN.

XXXV. NEW YORK HYGIEO-THERAPEUTIC COL-  
LEGE, NEW YORK CITY.

XXXVI. BELLEVUE HOSPITAL MEDICAL COLLEGE,  
NEW YORK CITY.

[No formal report was received from the above named institutions  
during the past year.]



Tabular Statement—(Continued).

MEDICAL COLLEGES.	Number of emeritus professors.	Number of professors.	Number of demonstrators and lecturers.	Number of students.	Number of graduates in 1973.	Value of college buildings and grounds.	Amount of matriculation fees received.	Amount of graduation fees received.
College of Physicians and Surgeons of the City of New York.....	2	16	5	350	77	\$150,000 00	\$1,680 00	\$2,260 00
.....	.....	6	1	24	8	16,049 12	106 00	160 00
City of the City of New York.....	.....	.....	.....	197	75	50,000 00	.....	.....
.....	.....	12	.....	93	38	.....	400 00	625 00
.....	.....	7	.....	101	35	19,000 00	.....	.....
.....	.....	9	2	94	37	.....	455 00	925 00
.....	.....	13	2	163	35	.....	.....	.....
.....	1	11	4	33	8	50,000 00	150 00	None.
.....	1	7	1	75	16	.....	250 00	480 00
.....	1	5	3	34	12	.....	.....	.....
New York College of Dentistry.....	9	36	24	1,099	332	\$285,049 12	\$3,080 00	\$4,440 00

## XXXVIII. INSTITUTIONS COMPOSING THE UNIVERSITY OF THE STATE OF NEW YORK.

Alphabetical lists of all the colleges and academies incorporated within this State prior to the publication of this report, with the location, date of charter, and authority (Legislature or Regents) granting such charters, are contained in the Eighty-second Annual Report of the Regents to the Legislature, pages 360-380, with the exception of the following :

## LITERARY COLLEGES.

St. John's College, Brooklyn, Kings county, incorporated September 29, 1871, under the general act "for the incorporation of benevolent, charitable, scientific and missionary societies," passed April 12, 1848, and the several acts amending the same.

Syracuse University, Syracuse, Onondaga county, incorporated March 29, 1870, under the general act "for the incorporation of benevolent, charitable, scientific and missionary societies," passed April 12, 1848, and the several acts amending the same.

Touissaint L'Ouverture College, Poughkeepsie, Dutchess county, incorporated by the Legislature, April 3, 1871.

Tracy Female College, Rochester, Monroe county. Name changed from Tracy Female Institute, by the Legislature, May 21, 1872.

Union University; incorporated by an act of the Legislature, passed April 10, 1873, authorizing Union College, the Albany Medical College, the University of Albany and the Dudley Observatory to unite for certain purposes and to form a corporation to be called the Union University.

Wells College, Aurora, Cayuga county. Name changed from Wells Seminary, by the Regents, March 29, 1870.

## MEDICAL COLLEGES.

Capital City Medical College, Albany, incorporated by the Legislature, April 13, 1871.

New York College of Anæsthesia, New York city, incorporated by the Legislature, June 18, 1873.

New York Free Medical College for Women, New York city, incorporated by the Legislature, April 12, 1871.

New York Hygieo-Therapeutic College, New York city, incorporated by the Legislature, April 15, 1857.

New York Medical College, New York city, incorporated by the Legislature, April 8, 1850.

Women's Medical College of the New York Infirmary for Women and Children, New York city, incorporated by the Legislature, April 13, 1864.

**ACADEMIES, ETC.**

Adelphia Academy of Bróoklyn, incorporated by the Regents, August 3, 1870.

Afton Union School, Afton, Chenango county; academical department received under visitation, January 11, 1872.

Albany High School (formerly Albany Free Academy); made subject to the visitation of the Regents, by the Legislature, April 26, 1873.

Almond Academy, Almond, Allegany county, incorporated by the Legislature, April 12, 1870; received under visitation, January 11, 1872.

Black River Conference Seminary, Antwerp, Jefferson county. Name changed from Antwerp Liberal Literary Institute, by the Legislature, April 22, 1870, and to Northern New York Conference Seminary, April 10 1873.

Canastota Union School, Canastota, Madison county; academical department received under visitation, January 13, 1871.

Candor Union School, Candor, Tioga county; academical department received under visitation, January 13, 1871.

Carthage Union School, Carthage, Jefferson county; academical department received under visitation, June 2, 1871.

Central New York Conference Seminary, Cazenovia, Madison county. Name changed from Oneida Conference Seminary, by the Regents, August 3, 1870.

Champlain Union School, Champlain, Clinton county; academical department (formerly Champlain Academy) received under visitation, January 9, 1873.

Christian Brothers' Academy of Albany, incorporated by the Regents, August 3, 1869.

Cobleskill Union School, Cobleskill, Schoharie county; academical department received under visitation, June 10, 1873.

Colgate Academy. Name changed from Grammar School of Madison University, by the trustees of Madison University, in 1873.

Cook Academy, Havana, Schuyler county; incorporated by the Regents, August 10, 1872.



Cooperstown Union School, Cooperstown, Otsego county ; academical department received under visitation, January 9, 1873.

Dean Academy, Binghamton, Broome county ; incorporated by the Regents, August 7, 1872.

Dryden Union School, Dryden, Tompkins county ; academical department received under visitation, January 9, 1873.

Dunkirk Union School, Dunkirk, Chautauqua county ; academical department received under visitation, June 2, 1871.

East Hamburg Friends' Institute, East Hamburg, Erie county, incorporated by the Regents, January 11, 1872.

Fairport Union School, Fairport, Monroe county ; academical department received under visitation, January 9, 1873.

Fort Edward Union School, Fort Edward, Washington county ; academical department received under visitation, June 10, 1873.

Groton Union School, Groton, Tompkins county ; academical department (formerly Groton Academy) received under visitation, June 10, 1873.

Hamburg Union School, White's Corners, Erie county ; academical department received under visitation, January 13, 1870.

Henrietta Union School, Henrietta, Monroe county ; academical department (formerly Monroe Academy) received under visitation, June 2, 1871.

Holland Patent Union School, Holland Patent, Oneida county ; academical department received under visitation, June 2, 1871.

Lisle Union School, Lisle, Delaware county ; academical department received under visitation, June 10, 1873.

Martin Institute, Martinsburgh, Lewis county, incorporated by the Regents, January 13, 1870.

Massena Union School, Massena, St. Lawrence county ; academical department received under visitation, June 2, 1871.

Northern New York Conference Seminary, Antwerp, Jefferson county. Name changed from Black River Conference Seminary, by the Legislature, April 10, 1873.

Nyack Union School, Nyack, Rockland county ; academical department received under visitation, August 3, 1869.

Ovid Union School, Ovid, Seneca county ; academical department (formerly East Genesee Conference Seminary) received under visitation, January 9, 1873.

Rockville Centre Institute, Rockville Centre, Queens county, incorporated September 27, 1871, under the general act "for the

incorporation of benevolent, charitable, scientific and missionary societies," passed April 12, 1848, and the several acts amending the same.

Sandy Hill Union School, Sandy Hill, Washington county; academical department received under visitation, June 2, 1871.

Stamford Seminary, Stamford, Delaware county, incorporated by the Regents, January 11, 1872.

Waterford Union School, Waterford, Saratoga county; academical department received under visitation, June 2, 1871.

Waverly Union School, Waverly, Tioga county; academical department (formerly Waverly Institute) received under visitation, January 11, 1872.

Weedsport Union School, Weedsport, Cayuga county; academical department received under visitation, January 9, 1873.

Whitehall Union School, Whitehall, Washington county; academical department received under visitation, June 10, 1873.

Yates Union School, Chittenango, Madison county; academical department received under visitation, January 9, 1873.

## II. ABSTRACTS OF ANNUAL REPORTS OF ACADEMIES.

## SCHEDULE No. 1.

*Catalogue of Academies and Academical Departments of Union  
Schools arranged by Counties.*

## ALBANY.

Albany Academy .....	Albany.
Albany Female Academy .....	Albany.
Albany High School .....	Albany.
Christian Brothers' Academy .....	Albany.
Egberts' High School .....	Cohoes.

## ALLEGANY.

Alfred University, Acad. Department...	Alfred Centre.
Almond Academy .....	Almond.
Friendship Academy .....	Friendship.
Genesee Valley Seminary .....	Belfast.
Richburgh Union School .....	Richburgh.
Rushford Union School .....	Rushford.

## BROOME.

Binghamton Academy .....	Binghamton.
Dean Academy .....	Binghamton.
Deposit Academy .....	Deposit.
Lisle Union School .....	Lisle.
Whitney's Point Union School .....	Whitney's Point.
Windsor Union School .....	Windsor.

## CATTARAUGUS.

Chamberlain Institute .....	Randolph.
Olean Union School .....	Olean.
Ten Broeck Free Academy ....	Franklinville.

## CAYUGA.

Auburn Academic High School .....	Auburn.
Cayuga Lake Academy .....	Aurora.
Friends' Academy .....	Union Springs.
Moravia Union School .....	Moravia.
Port Byron Free School and Academy..	Port Byron.
Weedsport Union School .....	Weedsport.

## CHAUTAUQUA.

Dunkirk Union School.....	Dunkirk.
Ellington Union School.....	Ellington.
Forestville Free Academy.....	Forestville.
Jamestown Union School and Col. Inst..	Jamestown.
Mayville Union School.....	Mayville.
Westfield Academy and Union School..	Westfield.

## CHEMUNG.

Elmira Free Academy.....	Elmira.
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## CHENANGO.

Afton Union School.....	Afton.
New Berlin Academy .....	New Berlin.
Norwich Academy.....	Norwich.
Oxford Academy .....	Oxford.
Sherburne Union School.....	Sherburne.

## CLINTON.

Champlain Union School .....	Champlain.
Plattsburgh High School.....	Plattsburgh.

## COLUMBIA.

Claverack Academy and Hud. River Inst.,	Claverack.
Hudson Academy.....	Hudson.
Kinderhook Academy .....	Kinderhook.
Spencertown Academy .....	Spencertown.

## CORTLAND.

Cincinnatus Academy .....	Cincinnatus.
Homer Academy and Union School.....	Homer.
McGrawville Union School.....	McGrawville.

## DELAWARE.

Delaware Academy .....	Delhi.
Delaware Literary Institute .....	Franklin.
Stamford Seminary .....	Stamford.
Walton Union School .....	Walton.

## ERIE.

Aurora Academy .....	East Aurora.
Buffalo Central School.....	Buffalo.
Buffalo Female Academy .....	Buffalo
Clarence Classical Union School .....	Clarence.

East Hamburg Friends' Institute.....	East Hamburg.
Griffith Institute.....	Springville.
Hamburg Union School .....	Hamburg.
Williamsville Academy.....	Williamsville.

## ESSEX.

Elizabethtown Union School .....	Elizabethtown.
Keeseville Union School.....	Keeseville.
Moriah Academy.....	Moriah.
Westport Union School.....	Westport.

## FRANKLIN.

Fort Covington Academy .....	Fort Covington.
Franklin Academy.....	Malone.

## FULTON.

*Gloversville Union School .....	Gloversville.
Johnstown Union School .....	Johnstown.

## GENESEE.

Batavia Union School .....	Batavia
Cary Collegiate Seminary.....	Oakfield.
Genesee and Wyoming Seminary .....	Alexander.
Le Roy Academic Institute .....	Le Roy.
Rural Seminary .....	East Pembroke.

## GREENE.

Catskill Free Academy .....	Catskill.
Coxsackie Academy.....	Coxsackie.
Greenville Academy .....	Greenville.

## HERKIMER.

Academy at Little Falls .....	Little Falls.
Fairfield Academy.....	Fairfield.
West Winfield Academy.....	West Winfield.

## JEFFERSON.

Northern N. Y. Conference Seminary...	Antwerp.
Carthage Union School .....	Carthage.
Hungerford Collegiate Institute.....	Adams.
Union Academy of Belleville.....	Belleville.
Watertown High School .....	Watertown.

## KINGS.

Adelphi Academy .....	Brooklyn.
Brooklyn Col. and Poly. Institute.....	Brooklyn.

Erasmus Hall Academy . . . . . Flatbush.  
 Packer Collegiate Institute . . . . . Brooklyn.

## LEWIS.

Lowville Academy . . . . . Lowville.  
 Martin Institute . . . . . Martinsburgh.

## LIVINGSTON.

Dansville Seminary . . . . . Dansville.  
 Genesee Wesleyan Seminary . . . . . Lima.  
 Geneseo Academy . . . . . Geneseo.  
 Jane Grey School . . . . . Mount Morris.  
 Mount Morris Union School . . . . . Mount Morris.  
 Nunda Academy . . . . . Nunda.

## MADISON.

Brookfield Academy . . . . . Brookfield.  
 Canastota Union School . . . . . Canastota.  
 Central New York Conference Seminary, Cazenovia.  
 De Ruyter Institute . . . . . De Ruyter.  
 Evans Academy . . . . . Peterborough.  
 Colgate Academy (formerly Grammar  
 School of Madison University . . . . . Hamilton.  
 Oneida Seminary . . . . . Oneida.  
 Yates Union School . . . . . Chittenango.

## MONROE.

Chili Seminary . . . . . North Chili.  
 Fairport Union School . . . . . Fairport.  
 Henrietta Union School . . . . . Henrietta.  
 Parma Institute . . . . . Parma.  
 Penfield Seminary . . . . . Penfield.  
 Rochester Female Academy . . . . . Rochester.  
 Rochester Free Academy . . . . . Rochester.  
 Webster Academy . . . . . Webster.

## MONTGOMERY.

Ames Academy . . . . . Ames.  
 Amsterdam Academy . . . . . Amsterdam.  
 Canajoharie Academy . . . . . Canajoharie.  
 Fort Plain Seminary and Fem. Col. Inst., Fort Plain.  
 Palatine Bridge Union School . . . . . Palatine Bridge.

## NIAGARA.

Lockport Union School . . . . . Lockport.  
 Wilson Union School . . . . . Wilson.

## ONEIDA.

Augusta Academy .....	Augusta.
Clinton Grammar School .....	Clinton.
Clinton Liberal Institute.....	Clinton.
Holland Patent Union School .....	Holland Patent.
Rome Academy .....	Rome.
Sauquoit Academy .....	Sauquoit.
Utica Academy.....	Utica.
Utica Female Academy.....	Utica.
Vernon Academy.....	Vernon.
Whitestown Seminary.....	Whitestown.

## ONONDAGA.

Baldwinsville Free Academy .....	Baldwinsville.
Jordan Academy .....	Jordan.
Munro Collegiate Institute.....	Elbridge.
Onondaga Academy.....	Onondaga Valley.
Pompey Academy .....	Pompey.
Skaneateles Union School.....	Skaneateles.
Syracuse High School .....	Syracuse.

## ONTARIO.

Canandaigua Academy .....	Canandaigua.
East Bloomfield Academy.....	East Bloomfield.
Geneva Classical and Union School....	Geneva.
Naples Academy .....	Naples.
Ontario Female Seminary.....	Canandaigua.
Phelps Union and Classical School .....	Phelps.

## ORANGE.

Chester Union School .....	Chester.
Farmer's Hall Academy .....	Goshen.
Montgomery Academy .....	Montgomery.
Port Jervis Union School.....	Port Jervis.
S. S. Seward Institute .....	Florida.
Wallkill Free Academy.....	Middletown.
Warwick Institute .....	Warwick.

## ORLEANS.

Albion Academy .....	Albion.
Holley Union School .....	Holley.
Medina Free Academy .....	Medina.
Phipps Union Seminary .....	Albion.
Yates Academy.....	Yates.

## OSWEGO.

Falley Seminary.....	Fulton.
Mexico Academy .....	Mexico.
Oswego High School .....	Oswego.
Pulaski Academy.....	Pulaski.

## OTSEGO.

Cooperstown Union School.....	Cooperstown.
Gilbertsville Academy and Col. Institute,	Butternuts.
Hartwick Seminary .....	Hartwick Seminary, P. O.
Unadilla Academy .....	Unadilla.

## QUEENS.

Union Hall Academy .....	Jamaica.
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## RENSSELAER.

Hoosick Falls Union School .....	Hoosick Falls.
Lansingburgh Academy .....	Lansingburgh.
Nassau Academy .....	Nassau.
Troy Academy .....	Troy.
Troy Female Seminary. ....	Troy.
Troy High School .....	Troy.

## ROCKLAND.

Nyack Union School .....	Nyack.
Rockland Female Institute.....	Nyack.

## ST. LAWRENCE.

Canton Union School.....	Canton.
Gouverneur Wesleyan Seminary .....	Gouverneur.
Lawrenceville Academy .....	Lawrenceville.
Massena Union School.....	Massena.
Ogdensburgh Educational Institute.....	Ogdensburgh.

## SARATOGA.

Halfmoon Academy.....	Halfmoon.
Mechanicville Academy .....	Mechanicville.
Saratoga Springs Union School.....	Saratoga Springs.
Temple Grove Seminary.....	Saratoga Springs.
Waterford Union School.....	Waterford.

## SCHENECTADY.

Schenectady Union School .....	Schenectady.
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## SCHOHARIE.

Cobleskill Union School .....	Cobleskill.
New York Conf. Seminary and Col. Inst.,	Charlotteville.
Schoharie Academy .....	Schoharie.

## SCHUYLER.

Cook Academy .....	Havana.
Watkins Academic Union School .....	Watkins.

## SENECA.

Ovid Union School .....	Ovid.
Seneca Falls Academy .....	Seneca Falls.
Waterloo Union School .....	Waterloo.

## STEUBEN.

Addison Academy and Union School...	Addison.
Canisteo Academy .....	Canisteo.
Corning Free Academy .....	Corning.
Franklin Academy .....	Prattsburgh.
Haverling Union School .....	Bath.
Rogersville Union Seminary .....	South Dansville.
Woodhull Academy .....	Woodhull.

## SUFFOLK.

Huntington Union School .....	Huntington.
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## SULLIVAN.

Liberty Normal Institute .....	Liberty.
Monticello Academy .....	Monticello.

## TIOGA.

Candor Union School .....	Candor.
Owego Free Academy .....	Owego.
Waverly Union School .....	Waverly.

## TOMPKINS.

Dryden Union School .....	Dryden.
Groton Union School .....	Groton.
Ithaca Academy .....	Ithaca.
Trumansburgh Academy .....	Trumansburgh.

## ULSTER.

Kingston Free Academy .....	Kingston.
New Paltz Academy .....	New Paltz.
Ulster County Female Seminary .....	Ellenville.

## WARREN.

Glen's Falls Academy .....	Glen's Falls.
Warrensburgh Academy .....	Warrensburgh.

## WASHINGTON.

Argyle Academy .....	Argyle.
Cambridge Washington Academy .....	Cambridge.
Fort Edward Collegiate Institute .....	Fort Edward.
Fort Edward Union School .....	Fort Edward.
Greenwich Union School .....	Greenwich.
Hartford Academy .....	South Hartford.
Marshall Seminary of Easton .....	Easton.
North Granville Ladies' Seminary . . .	North Granville.
Sandy Hill Union School .....	Sandy Hill.
Washington Academy .....	Salem.
West Hebron Union School .....	West Hebron.
Whitehall Union School .....	Whitehall.

## WAYNE.

Leavenworth Institute .....	Wolcott.
Lyons Union School .....	Lyons.
Macedon Academy .....	Macedon Centre.
Marion Collegiate Institute .....	Marion.
Newark Union School and Academy . . .	Newark.
Palmyra Classical and Union School . . .	Palmyra.
Red Creek Union Seminary .....	Red Creek.
Sodus Academy .....	Sodus.
Walworth Academy .....	Walworth.

## WESTCHESTER.

Mount Pleasant Academy .....	Sing Sing.
Peekskill Academy .....	Peekskill.

## WYOMING.

Arcade Union School .....	Arcade.
Attica Union School .....	Attica.
Middlebury Academy .....	Wyoming.
Perry Academy .....	Perry.
Pike Seminary .....	Pike.
Warsaw Union School .....	Warsaw.

## YATES.

Penn Yan Academy .....	Penn Yan.
Rushville Union School .....	Rushville.
Starkey Seminary .....	Eddytown.

## SCHEDULE No. 2.

Being an alphabetical catalogue of the academies and academical departments of Union Schools reporting in 1872, for the academic year ending between the 20th of June and 15th of September of said year, with their respective locations, the names of the Principal and Officers of the Board of Trustees in each, the number and quorum of the board, and the date of the close of the academic year, as fixed by the trustees of each academy.

Number.	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	Number of Pupils.	Quorum.	Academic year ends.
1.	Academy at Little Falls, Little Falls, Herkimer county.	Wm. F. Bridge .....	President, Archibald Loomis .....	15	7	Aug. 12
2.	Addison Union School, Addison, Steuben county.	Theodore F. Welch, A. B., Yale College .....	.....	9	5	July 31
3.	Adelphi Academy, Brooklyn, Kings county .....	Homer B. Sprague, M. A., Graduate Yale College.	.....	94	7	June 21
4.	Afton Union School, Afton, Chenango county .....	E. W. Rogers .....	.....	8	3	Nov. 15
5.	Albany Academy, Albany, Albany county .....	Merrill E. Gates, A. B., Graduate Rochester University.	.....	16	5	Aug. 31
6.	Albany Female Academy, Albany, Albany county.	Miss Louisa Ostrom .....	.....	.....	.....	June 3
7.	Albion Academy, Albion, Orleans county .....	Oliver Morehouse, A. M. ....	.....	12	7	Aug. 5
8.	Alfred University, Academical Department, Alfred Centre, Allegany county.	Jonathan Allen, A. M., Graduate Oberlin College.	.....	33	11	July 4
9.	Almond Academy, Almond, Allegany county .....	Rev. J. S. Bingham, A. B. ....	.....	18	7	June 23
10.	Ames Academy, Ames, Montgomery county .....	A. E. Miller .....	.....	15	7	July 15
11.	Amsterdam Academy, Amsterdam, Montgomery county.	Charles C. Wetzel .....	Treasurer and Secretary, A. Lehnman .. President, Hon. Stephen Sanford .. Treasurer, David W. Abaler .. Secretary, James H. Brownson ..	31	5	Sept. 1

12..	Arade Union School, Arcade, Wyoming county..	Mary Wright...	President, Gideon Benley	6	4	Sept. 1
13..	Argyle Academy, Argyle, Washington county.....	W. H. Sybrandt...	Treasurer, B. F. Harty	18	7	Aug. 1
14..	Attica Union School, Attica, Wyoming county.....	Thomas E. Lovell, A. M., University of Rochester,	Secretary, W. H. Wilson	6	4	July 15
15..	Auburn Academic High School, Auburn, Cayuga county.	John E. Myer, A. M., Graduate Williams College,	President, James Savage, M. D.	18	7	July 31
16..	Augusta Academy, Augusta, Oneida county.....	Geo. W. Miles, Graduate Hamilton College....	Treasurer, John C. Bill, M. D.	18	10	Aug. 31
17..	Aurora Academy, East Aurora, Erie county.....	Charles W. Merritt, A. M., Graduate Hamilton College.	Secretary, Gideon D. Stewart	18	7	June 31
18..	Baldwinsville Academy, Baldwinsville, Onondaga county.	Abner E. Lasher .....	.....	6	4	July 8
19..	Batavia Union School, Batavia, Genesee county ..	Gardner Fuller, A. M., Graduate Wesleyan University.	.....	6	4	June 30
20..	Binghamton Academy, Binghamton, Broome county.	E. S. Frisbee, Graduate Amherst College.....	.....	11	6	July 31
21..	Black River Conference Seminary, Antwerp, Jefferson county.	S. M. Coon, University of Rochester.....	.....	18	7	June 30
22..	Brookfield Academy, Brookfield, Madison county,	Jella C. Babcock.....	.....	12	7	July 30
23..	Brooklyn Collegiate and Polytechnic Institute, Brooklyn, Kings county.	David H. Cochran, Ph. D., LL. D., Graduate Hamilton College.	.....	17	7	June 30
24..	Buffalo Central School, Buffalo, Erie county .....	Ray T. Spencer, A. M.....	Treasurer, City Treasurer.....	1	1	June 30
25..	Buffalo Female Academy, Buffalo, Erie county....	Rev. Albert T. Chester, D. D., Graduate Union College.	Secretary, Orasmus H. Marshall	18	7	Sept. 1
26..	Cambridge Washington Academy, Cambridge, Washington county.	Amelia Merriam.....	Treasurer and Secretary, D.	18	7	Aug. 31
27..	Canandaigua Academy, Canandaigua, Ontario county.	Noah T. Clarke, Ph. D....	President, Secretary, Treasurer,	18	7	July 5

\* No report given in 1878; officers given as last reported.

## SCHEDULE No. 2—(Continued).

Number.	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	No of trustees.	Duration.	Academic year ends.
26..	Canastota Union School, Canastota, Madison county.	Aaron White, A. M., Graduate Wesleyan University.	President, Dr. M. B. Jarvis Treasurer, Secretary,	5	3	Aug. 31
29	Candor Free Academy, Candor, Tioga county.....	Lemuel D. Vose, Graduate State Normal School, Oswego.	President, Treasurer,	6	4	July 14
30..	Canisteo Academy, Canisteo, Steuben county.....	Rev. J. S. Bingham, A. B.....	Secretary, President, Rev. L. F. Laine Treasurer, John H. Conasalus	14	7	July 15
31	Canton Union School, Canton, St. Lawrence county.	W. W. Thompson, Graduate Middlebury College.	Secretary, George Riddell President, William H. Sawyer Treasurer, William H. Kimball.	9	5	June 31
32..	Carthage High School, Carthage, Jefferson county,	Melville J. Morse .....	Secretary, J. F. Bugbee President, Horace Hooker Treasurer, O. Holcomb.	..	..	Aug. 1
33..	Cary Collegiate Seminary, Oakfield, Genesee county.	Rev. James R. Coe, A. M. ....	Secretary, L. G. Peck .....	34	7	June 30
34..	Catakill Free Academy, Catskill, Greene county..	Wm. P. McLaury, A. B., Graduate Union College.	..	9	5	July 19
35..	Cayuga Lake Academy, Aurora, Cayuga county ..	Chas. Keleczy, M. A., Graduate Hamilton College..	..	9	5	Aug. 15
36.	Central New York Conference Seminary, Cassenova, Madison county.	Rev. Winfield S. Smyth, A. M., Graduate Wesleyan University.	..	15	7	Aug. 1
37..	Chamberlain Institute, Randolph, Cattaraugus county.	Rev. James T. Edwards, A. M., Graduate Wesleyan University.	..	13	7	June 30
38..	Champlain Academy, Champlain, Clinton county..	S. H. Foster, Graduate Middlebury College.	..	19	7	July 7
39..	Chester Academy, Chester, Orange county.....	Andrew H. Hart.....	..	5	3	Sept. 30
40..	Chili Seminary, North Chili, Monroe county.....	George W. Anderson .....	President, B. T. Roberts. Treasurer and Secretary, Leonard Halstead.	15	6	Sept. 4
41.	Christian Brothers' Academy, Albany, Albany county	Brother Hugh. ....	President, John Costigan Treasurer, William Caseidy Secretary, John M. Kimball.	16	7	July 15



## SCHEDULE No. 2—(Continued).

Number.	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	No. of Trustees.	Quorum.	Academic year ends.
58..	Egberts High School, Cohoes, Albany county.....	Oliver P. Steves, A. M., Graduate Union College..	President, Murray Hubbard..... Treasurer, Leonard Cary.....	10	6	June 28
59..	Elizabethtown Union School, Elizabethtown, Essex county.	John W. Chandler .. .. .	Secretary, J. H. Eagan, City Clerk..... President, Byron Pond.....	6	4	July 15
60..	Ellington Union School, Ellington, Chautauque county.	P. T. Burke, Graduate Middlebury College.....	Treasurer, Charles H. Noble..... Secretary, George S. Nicholson.....	9	5	Aug. 20
61.	Elmira Free Academy, Elmira, Chemung county..	J. Dorman Steele, Ph. D., Graduate Genesee College.	President, M. M. Carpenter..... Treasurer, Theo. A. Case.....	9	5	June 28
62..	Erasmus Hall Academy, Flatbush, Kings county..	Rev. Eli T. Mack, A. M., Graduate Williams College.	Secretary, James Brooks.....	19	7	Sept. 1
63..	Evans Academy, Peterborough, Madison county..	Flake Barnett. .... .	.....	12	7	July 1
64..	Fairfield Academy, Fairfield, Herkimer county ...	Geo. S. Griffin, A. M., Graduate Genesee College.	.....	24	7	July 25
65..	Folley Seminary, Fulton, Oswego county.....	Rev. Jas. Gilmour, A. M., Graduate Union College.	.....	9	5	July 31
66..	Forestville Free Academy, Forestville, Chautauque county.	Levi D. Miller, A. M., Graduate Hamilton College.	.....	5	3	July 31
67..	Port Corvington Academy, Port Corvington, Franklin county.	Walter H. Winchester, Amherst College.....	.....	9	5	Aug. 31
68..	Port Edward Collegiate Institute, Port Edward, Washington county.	Rev. Joseph E. King, D. D., Ph. D., Graduate Wesleyan University.	.....	16	7	June 13
69.	Port Plain Seminary and Female Collegiate Institute, Port Plain, Montgomery county.	H. A. Merrill .....	.....	16	7	June 20
70..	Franklin Academy, Malone, Franklin county.....	Wm. B. Aumock, A. M., Graduate Western Reserve College.	.....	10	6	July 15
71	Franklin Academy, Prattburgh, Steuben county..	Paul E. Howes.....	President, Thomas Van Tassel..... Treasurer, A. K. Smith..... Secretary, George McLean .....	9	5	June 20

		Elijah Cook, Jr.	President (vacancy)						
72..	Friends' Academy, Union Springs, Cayuga county,							4	July 30
73..	Friendship Academy, Friendship, Allegany county,	W. H. Pitt, A. M., Graduate Union College.....						7	June 22
74..	Genesee Valley Seminary, Belfast, Allegany county,	D. N. Burke, A. M., Graduate Middlebury College,						7	June 26
75..	Genesee Wesleyan Seminary, Lima, Livingston county.	Rev. Herbert F. Flak, A. M., Graduate Wesleyan University.						7	July 19
76..	Genesee and Wyoming Seminary, Alexander, Genesee county.	Emily G. Thrall.....						7	Sept. 9
77..	Genesee Academy, Genesee, Livingston county ..	Rev. John Jones, A. M., Graduate University of Pennsylvania.						7	July 8
78..	Geneva Classical and Union School, Geneva, Ontario county.	William H. Vrooman, A. M., Graduate Union College.						8	Aug. 31
79..	Gilbertsville Academy and Collegiate Institute, Buttertun, Otsego county.	Rev. Abel Wood, A. M., Graduate Dartmouth College.						7	Aug. 1
80..	Glen's Falls Academy, Glen's Falls, Warren county.	Christopher W. Hall, A. B., Graduate Middlebury College.						7	July 17
81..	Gloversville Union School, Gloversville, Fulton county.	Henry A. Pratt, A. B., Graduate Yale College.....						5	June 26
82..	Gouverneur Wesleyan Seminary, Gouverneur, St. Lawrence county.	M. H. Pittie, A. M., Graduate Dartmouth College.						5	June 31
83..	Grammar School of Madison University, Hamilton, Madison county.	James M. Taylor, A. M., Graduate Madison University.						9	June 19
84..	Greenville Academy, Greenville, Greene county ..	Philetus Phillips, A. M., Graduate Union College,						7	July 31
85..	Greenwich Union School, Greenwich, Washington county.	Clarence J. Doughty.....						5	Sept. 30
86..	Griffith Institute, Springville, Erie county.....	Anderson R. Wightman, A. M., Graduate Union College.						5	July 31
87..	Groton Academy, Groton, Tompkins county .....	Martin M. Baldwin, A. M., Graduate Hobart College.						7	Aug. 1
88..	Halfmoon Academy, Halfmoon, Saratoga county..	William H. Wing.....						7	July 31



## SCHEDULE No. 2 — (Continued).

Number	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	No. of Trustees	Quorum	Academic year endy.
98.	Hamburg Union School, Hamburg, Erie county.	Charles W. Richards, Graduate Oswego Normal School.	President, Geo. Abbott Treasurer, Milford Fish Secretary, S. R. Saunders	9	5	July 31
99.	Hartford Academy, South Hartford, Washington county.	H. W. Hunt, A. B., Genesee College	President, Treasurer, Secretary, D.	15	8	July 1
99.	Hartwick Seminary, Hartwick Seminary P. O., Otsego county.	T. T. Titus	President, Treasurer, Secretary,	12	7	June 30
99.	Haverling Union School, Bath, Steuben county.	E. H. Latimer, A. M., Graduate Genesee College	President, Treasurer, William Allen Secretary, Chas. F. Kingsley	6	4	Aug. 1
99.	Holland Patent Union School, Holland Patent, Oneida county.	John G. Williams, A. M., Graduate Wesleyan University.	President, Wm. W. De Angellis Treasurer, Henry D. Nolton Secretary, Norton Wolcott, M. D.	9	5	July 1
99.	Holley Union School, Holley, Orleans county.	Abel Sullivan	President, Geo. W. Pierce Treasurer, Geo. W. Stoddard	6	4	June 30
99.	Hoosick Falls Union School, Hoosick Falls, Rensselaer county.	Mrs. Julia M. Dewey	Secretary, President, R. J. Phillips Treasurer, N. A. Gardner	4	3	Sept. 1
99.	Hudson Academy, Hudson, Columbia county	Rev. Abraham Mattice, A. M., Graduate Rutgers College.	Secretary, A. C. Eddy President, F. F. Folger Treasurer and	13	7	June 30
99.	Hungerford Collegiate Institute, Adams, Jefferson county.	Albert B. Watkins, A. M., Graduate Amherst College.	Secretary, Augustus McKinstry President, Solon D. Hungerford Treasurer, Hart Grenell	24	7	July 31
99.	Huntington Union School, Huntington, Suffolk county.	Charles G. Holyoke, Graduate Bowdoin College	Secretary, A. W. Ingraham President, Geo. B. Banks, M. D. Treasurer, Geo. B. Banks	6	4	July 3
99.	Ithaca Academy, Ithaca, Tompkins county	Wesley C. Olin, A. M., Graduate Wesleyan University.	Secretary, Charles R. Street President, D. Boardman Treasurer, E. S. Eddy	12	7	July 30
100.	Jamestown Union School and Collegiate Institute, Jamestown, Chautauque county.	Samuel G. Love, A. M., Graduate Hamilton College.	Secretary, S. H. Winton President, John M. Farham Treasurer, Alonzo Kent	7	4	Aug. 1
100.	Jane Grey School, Mt. Morris, Livingston co.	Mrs. W. E. Squires	Secretary, President, Treasurer,	24	12	July 1
100.	Johnstown Union School, Johnstown, Fulton county.	Rev. Joseph Thys	Secretary, President, Treasurer, Secretary,	9	5	Aug. 1



## SCHEDULE No. 2—(Continued).

Number.	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	No. of Trustees.	Quorum.	Academic year ends.
129.	Masena Union School, Masena, St. Lawrence county.	H. L. Peck, A. B., Graduate University of Vermont.	President, J. O. Bridges. Treasurer, J. E. Clary.	9	5	July 1
130.	Mayville Union School, Mayville, Chautauque county.	Thomas J. Pratt	Secretary, W. H. Paddock. President, Amos K. Warren.	9	5	Aug. 31
131.	McGrawville Union School, McGrawville, Cortland county.	Cyrus A. Peake, A. B., Graduate Union College.	Treasurer, W. P. Whiteside. Secretary, John F. Phelps.	9	5	July 15
132.	Mechanicville Academy, Mechanicville, Saratoga county.	Rev. Bernice D. Amos, A. M., Graduate Middlebury College.	President, Perrin H. McGraw. Secretary, Deane McGraw.	12	7	Aug. 6
133.	Medina Free Academy, Medina, Orleans county.	Miner H. Paddock, A. M., Graduate Genesee College.		9	5	June 30
134.	Mexico Academy, Mexico, Oswego county.	William H. Reese, A. B., Graduate Genesee College.	Treasurer, John M. Kennan. Secretary, S. C. Brown.	15	7	July 6
135.	Middlebury Academy, Wyoming, Wyoming county.	Francis W. Forbes	President, H. C. Peck. Treasurer, Samuel H. Stone.	15	7	July 11
136.	Montgomery Academy, Montgomery, Orange county.	Rev. R. J. Coné	Secretary, T. W. Skinner. President, Hugh T. Brooks.	14	7	Aug. 1
137.	Monticello Academy, Monticello, Sullivan county.	F. G. Snook, Graduate State Normal School.	Treasurer, Isaac G. Hammond. Secretary, Ebenezer Webster.	12	7	June 29
138.	Moravia Union School, Moravia, Cayuga county.	Hosea Curtice	President, S. M. Crawford. Treasurer, T. L. Jackson.	6	4	Aug. 15
139.	Mount Morris Union School and Academy, Mount Morris, Livingston county.	Isaac O. Best, Graduate Hamilton College.	Secretary, J. M. Wilkin. President, A. C. Niven.	9	5	June 21
140.	Mount Pleasant Academy, Sing Sing, Westchester county.	W. W. Benjamin, Graduate Norwich University.	Treasurer, Richard Oakley. Secretary, James L. Stewart.	13	7	July 1
141.	Munro Collegiate Institute, Elbridge, Onondaga county.	Truman K. Wright, A. M., Graduate Middlebury College.	President, L. J. Ames. Treasurer, H. H. Tutill.	13	6	July 25
142.	Naples Academy, Naples, Ontario county.	A. J. Osborn, Graduate Brockport State Normal School.	Secretary, C. W. Maurice. President, John Rice.	9	5	June 30
			Treasurer, John Munro. Secretary, Luke Ranney.			
			President, Emory B. Postle. Treasurer, Hiram Maxwell.			
			Secretary, Elijah Wells.			

123.	Nassau Academy, Nassau, Rensselaer county .....	Albert B. Wiggins, A. M., Graduate Colby University.	12	7	July 1
134.	Newark Union School and Academy, Newark, Wayne county.	Orville B. Seagrave .....	3	3	July 5
135.	New Berlin Academy, New Berlin, Chenango county.	James M. Sprague, Madison University .....	12	7	Aug. 31
136.	New Paltz Academy, New Paltz, Ulster county ..	Dr. H. M. Bauscher, University of Marburg .....	15	7	Sept. 5
137.	New York Conference Seminary and Collegiate Institute, Charlotteville, Schoharie county.	Rev. Solomon Sias, A. M., M. D., Graduate Wesleyan University.	16	7	Aug. 2
138.	North Granville Ladies' Seminary, North Granville, Washington county.	W. W. Dowd, A. M., Graduate Connecticut Normal School.	9	5	Aug. 15
139.	Norwich Academy, Norwich, Chenango county ..	Hiram L. Ward, A. M., Graduate Hamilton College.	13	7	July 1
140.	Nunda Academy, Nunda, Livingston county ..	W. H. Truesdale, A. M., Graduate Rochester University.	20	7	June 25
141.	Ogdensburgh Educational Institute, Ogdensburgh, St. Lawrence county.	W. H. Faulkner .....	9	5	June 30
142.	Oneida Seminary, Oneida, Madison county .....	Rev. J. D. Houghton, A. M., Graduate Union College.	14	7	July 15
143.	Onondaga Academy, Onondaga Valley, Onondaga county.	A. G. Harrington .....	9	5	July 5
144.	Ontario Female Seminary, Canandaigua, Ontario county.	Benjamin Richards, A. M., Graduate Union College, and E. O. Hovey .....	9	5	June 25
145.	Oswego High School, Oswego, Oswego county .....	Emerson J. Hamilton, Ph. D., Graduate University of Vermont.	16	9	July 1
146.	Owego Free Academy, Owego, Tioga county .....	T. L. Griswold .....	6	4	Aug. 31
147.	Oxford Academy, Oxford, Chenango county .....	Herbert J. Cook, Graduate Amherst College .....	12	7	July 1
148.	Packer Collegiate Institute, Brooklyn, Kings county.	Alonso Crittenden, Ph. D., Graduate Union College.	16	8	June 18
149.	Palmyra Classical Union School, Palmyra, Wayne county.	Cicero M. Hutchins, A. M., Graduate Genesee College.	9	5	July 15
		Secretary, Henry Parker Morgan .....			
		President, George G. Jessup .....			
		Treasurer, David S. Aldrich .....			
		Secretary, Isaac G. Bronson .....			

## SCHEDULE No. 2 — (Continued).

Number.	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	No. of Pupils.	Months.	Academic year ends.
150.	* Palestine Bridge Union School, Palestine Bridge, Montgomery county.	R. P. Orr, Graduate Union College.....	President, De Witt W. Gross Treasurer, David Snell Secretary, E. J. Ellithorpe	8	2	June 30
151.	* Parma Institute, Parma, Monroe county.....	Cora C. Clark.....	President, John H. Collins. Treasurer, John M. Webster. Secretary, James Gersline.....	9	6	Sept. 14
152.	Peekskill Academy, Peekskill, Westchester Co....	Albert Wells, A. M., Graduate Rutgers College.....		12	7	Aug. 31
153.	Penn Yan Academy, Penn Yan, Yates county.....	Samuel D. Barr, A. M., Graduate Williams College.		9	6	June 31
154.	Perry Academy, Perry, Wyoming county.....	Rev. E. Wildman, A. M., Graduate Union College.	D. D.	14	7	July 3
155.	Phelps Union and Classical School, Phelps, On- tario county.	Hyland C. Kirk, Graduate Amherst College.....		5	3	July 15
156.	Philpps Union Seminary, Albion, Orleans county,	Mrs. Caroline F. Achilles.....		12	7	Aug. 3
157.	Pike Seminary, Pike, Wyoming county ..	W. P. Morgan ..		19	7	June 30
158.	Plattsburgh High School, Plattsburgh, Clinton county.	Oscar Atwood ..		10	6	June 30
159.	Pompey Academy, Pompey, Onondaga county.....	John L. Cook, Graduate Hamilton College.....		13	7	July 31
160.	Port Byron Free School and Academy, Port Byron, Cayuga county.	D. D. Van Allen, Graduate Alfred University ..	Secretary, Orion G. Dibble. President, William D. Osborn.....	9	5	July 1
161.	Port Jervis Union School, Port Jervis, Orange county.	A. B. Wilbur, A. M., Graduate Yale College .....	Treasurer, Secretary, Treasurer,	7	4	Aug. 30
162.	Pulaski Academy, Pulaski, Oswego county .....	S. Duffy, A. M., Graduate Union College.....	Secretary, President, Treasurer, B. Snow.....	9	5	June 31
163.	Red Creek Union Seminary, Red Creek, Wayne county	F. E. Morphey, Graduate Michigan University....	President, William P. Jones Treasurer, William O. Wood... Secretary, J. Lyon .....	9	5	June 30

		Mrs. Sarah J. Nichols.....	President, Isaac Mills.....	6	4	July 15
164.	Rochester Female Academy, Rochester, Monroe county.		Treasurer, T. C. Montgomery.....	.....	.....	.....
165.	Rochester Free Academy, Rochester, Monroe county.	Nehemiah W. Benedict, A. M., D. D., Graduate Madison University.	Secretary, J. A. Eastman.....	5	3	June 26
166.	* Rockland County Female Institute, Nyack, Rockland county.	Rev. L. Delos Mansfield .....	President, Theron E. Parsons.....	.....	.....	.....
167.	Rogersville Union Seminary, South Dansville, Stanben county.	William L. Haskell, D. D.....	.....	12	7	June 26
168.	Rome Academy, Rome, Oneida county.....	Geo. H. Barton, A. B., Graduate Genesee College.	.....	6	4	July 5
169.	Rural Seminary, East Pembroke, Genesee county.	Joseph D. Fisher, Graduate Hamilton College.....	.....	13	7	Aug. 15
170.	Rushville Union School, Rushville, Yates county.	J. E. Gordon, A. B., Graduate Genesee College.....	.....	9	5	July 1
171.	Saratoga Springs Union School, Saratoga, Saratoga county.	L. S. Peckard, Graduate Amherst College.....	.....	9	5	June 21
172.	Sandy Hill Union School, Sandy Hill, Washington county.	William McLaren, A. M., Graduate University of Glasgow.	.....	9	7	Sept. 1
173.	Sanquell Academy, Sanquell, Oneida county.....	L. Parsons Blissell, A. B., Graduate Hamilton College.	.....	16	9	Sept. 4
174.	Schenectady Union School, Schenectady, Schenectady county.	Samuel B. Howe, A. M., Graduate Union College.	.....	10	6	June 21
175.	Schoharie Academy, Schoharie, Schoharie county.	Oren C. Sikes, A. B., Graduate Williams College.	.....	8	5	Aug. 20
176.	Seneca Falls Academy, Seneca Falls, Seneca county.	Francis D. Hodgson, A. M., Graduate Wesleyan University.	.....	7	4	Aug. 6
177.	Sherburne Union School, Sherburne, Chenango county.	Louis Dembinski, A. M., Graduate Yale College..	.....	9	5	July 24
178.	Skaneateles Union School, Skaneateles, Onondaga county.	William C. Bowen, A. M., Graduate Wesleyan University.	.....	6	4	July 2
179.	Sodus Academy, Sodus, Wayne county.....	Elisha Curtiss, A. B., Graduate Union College....	Treasurer, C. W. Allen..... Secretary, R. R. Smith..... President, A. M. Winchester..... Treasurer, Orrin Smith..... Secretary, Edwin A. Green.....	12	7	July 20

Treasurer, C. W. Allen.....  
 Secretary, E. R. Smith.....  
 President, A. M. Winchester.....  
 Treasurer, Orrin Smith .....

\* No formal report in 1872; officers given as last reported.

## SCHEDULE No. 2—(Continued).

No.	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	No. of Trustees.	Quorum.	Academic year ends.
180.	Spencertown Academy, Spencertown, Columbia county.	C. B. Mead, Graduate Union College .....	President, Samuel Dean .....	15	8	Oct. 30
181.	S. S. Seward Institute, Florida, Orange county...	Thomas G. Schriver, A. M., Graduate Rutgers College, and Mrs. G. W. Seward (Pen. Dep.).	ward .....	9	1	June 31
182.	Starkey Seminary, Eddytown, Yates county ..	Oscar F. Ingalsbe, A. M. ....	.....	24	7	June 27
183.	Syracuse High School, Syracuse, Onondaga county,	Walter A. Brownell, Graduate Genesee College..	.....	8	5	June 28
184.	Ten Broeck Free Academy, Franklinville, Cattaraugus county.	William M. Beneon, A. M., Graduate Genesee College.	.....	3	2	July 3
185.	Troy Academy, Troy, Rensselaer county .....	T. Newton Willson, A. M., Graduate Washington College, Va.	Treasurer and Secretary, Andrew C. Adams. President, Francis N. Mann .....	12	5	Sept. 1
186.	Troy Female Seminary, Troy, Rensselaer county,	Mrs. Sarah L. Willard, Graduate Troy Female Seminary.	Treasurer and Secretary, T. Newton Willson President, Jonas C. Heath .....	12	7	June 26
187.	Troy High School, Troy, Rensselaer county .....	David Beattie, A. M., Graduate Amherst College,	Treasurer, Silas K. Stow .....	26	14	June 28
188.	Trumansburgh Academy, Trumansburgh, Tompkins county.	John G. Moore, Graduate Cornell University....	President, Thomas H. Marlow .....	12	7	July 1
189.	* Unadilla Academy, Unadilla, Otsego county .....	R. T. Chamberlain .....	Treasurer, George C. Bardett .....	12	7	July 1
190.	Union Academy of Bellville, Bellville, Jefferson county.	W. W. Grant, A. B., Graduate Harvard University,	Secretary, Wm. E. Horan .....	12	7	July 9
191.	* Union Hall Academy, Jamaica, Queens county ..	Jared Harbrouck, A. M., Graduate Rutgers College,	President, Herman Camp .....	20	7	July 18
192.	Utica Academy, Utica, Oneida county .....	George C. Sawyer, A. M., Graduate Harvard University.	Treasurer, A. G. Stone. ....	15	8	Sept. 15
193.	* Utica Female Academy, Utica, Oneida county..	Miss Jane E. Kelly .....	Secretary, M. G. Cook .....	6	4	July 31
194.			President, Wm. J. Bacon .....	.....	.....	July 4
			Treasurer and Secretary, M. M. Bang .....	.....	.....	

No.	School	President	Treasurer	Secretary	Aug.	Sept.
194.	Vernon Academy, Vernon, Oneida county	Randal Peace, A. B., Graduate Hamilton College	President, Isaac Freeman, M. D.	13	7	Sept. 8
195.	Wallkill Academy, Middletown, Orange county	Dr. H. Warren, A. M., Graduate Madison University	Secretary, A. Pierson Case	9	8	July 1
196.	Walton Union School, Walton, Delaware county	T. D. Barclay, B. D., Graduate Yale College	Treasurer, Dr. Wm. H. Dorrance	9	5	July 3
197.	Walworth Academy, Walworth, Wayne county	L. W. Church	Treasurer, Nathan Hallock	15	7	July 15
198.	Warrensburgh Academy, Warrensburgh, Warren county	Henry P. Robinson, A. B., Graduate Yale College	Secretary, Dr. H. Warren	13	7	July 10
199.	Warsaw Union School, Warsaw, Wyoming county	Flavel C. Selden	President, David H. Gay	6	4	July 21
200.	Warwick Institute, Warwick, Orange county	N. H. Dumond		9	5	July 21
201.	Washington Academy, Salem, Washington county	John A. McFarland, A. M., Graduate Union College		13	7	Aug. 20
202.	Waterford Union School, Waterford, Saratoga county	Andrew J. Robb, Graduate Union College		9	5	July 12
203.	Waterloo Union School, Waterloo, Seneca county	James S. Boughton		3	2	Aug. 1
204.	Watertown High School, Watertown, Jefferson county	Hanibal Smith, A. M., LL. B., Graduate Hamilton College		11	6	June 29
205.	Watkins Academy, Watkins, Schuyler county	J. L. Mack	President, L. M. Gano	9	5	July 1
206.	Waverly Institute, Waverly, Tioga county	S. C. Hall	Treasurer, O. Hurd	13	7	June 23
207.	Webster Academy, Webster, Monroe county	Erastus F. Maine	Secretary, J. L. Mack	12	7	Aug. 5
208.	Westfield Academy, Westfield, Chautauque county	John B. Foedick	President, N. Kinney	9	5	June 30
209.	West HEBRON Union School, West HEBRON, Washington county	Andrew J. Qua	Treasurer, Owen Spaulding	9	5	Aug. 31

\* No formal report in 1872; officers given as last reported.



## SCHEDULE No. 2—(Continued).

Number.	ACADEMIES, ETC.	Name of Principal.	Officers of the Board of Trustees.	No. of Trustees.	Quorum.	Academic year ends.
210	Westport Union School, Westport, Essex county,	Luther B. Newell, Graduate University of Vermont.	President, Aaron Clark Treasurer, James H. Allen Secretary, C. E. Stevens	9	5	Aug. 30
211.	West Winfield Academy, West Winfield, Herkimer county.	A. K. Goodier	President, J. W. Warner Treasurer, E. F. Beals	24	7	Aug. 31
212.	Whitestown Seminary, Whitestown, Oneida county.	James S. Gardner, Ph. D., Graduate Hamilton College.	Secretary, D. B. Briggs President, W. D. Wolcott Treasurer and	24	7	July 15
213	Whitney's Point Union School	T. H. Roberts	Secretary, James S. Gardner President, J. H. Burghardt	9	5	June 34
214.	Wilson Union School, Wilson, Niagara county	F. A. Greene, Graduate Rochester University	Treasurer, Charles S. Olmstead Secretary, E. F. Hyde President, H. N. Johnson	9	5	Sept. 30
215.	Windsor Union School, Windsor, Broome county,	A. W. Cooper	Treasurer, R. F. Wilson Secretary, H. Sanford President, Davis H. Hotchkiss	9	5	July 31
216	Woodhall Academy, Woodhall, Steuben county	Daniel H. Cobb, Graduate Alfred University	Treasurer, James R. Holden	13	7	June 30
217.	Yates Academy, Yates, Orleans county	L. R. Holroyd		15	5	June 14
218	Yates Polytechnic Institute, Chittenango, Madison county.	Annie L. Jones		9	5	July 30

## SCHEDULE No. 3,

Containing abstracts of the Academic Reports for 1872, for the year ending between the 20th of June and the 15th of September of said year, exhibiting the number of students taught in the several academies from which such reports have been received, the number, sex and age of those who are claimed to have pursued classical studies or the higher branches of English education, or both, and the number allowed by the Regents as such, with the apportionment to each academy of its distributive share of \$40,000 from the income of the Literature Fund.

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS AS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the Literature Fund in January, 1873.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who passed the nation, but pursued no preparation (those pursuing elementary studies only).	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Academy at Little Falls .....	13	14	30	105	19	16	3	16.4	19	...	\$181 81
Addison Union School (Acad. Dept.) .....	4	8	161	274	4	...	4	15.7	4	...	27 64
Adelphi Academy .....	10	30	139	553	13	9	3	15.2	12	...	32 94
Afton Union School (Acad. Dept.) .....	8	20	33	137	17	8	9	17.7	17	...	117 49
Albany Academy .....	...	39	143	...	...	...	...	...	...	...	...
Albion Academy .....	7	50	21	130	32	20	12	17.4	30	2	207 84
Alfred University (Acad. Dept.) .....	84	...	151	380	39	51	38	20.3	39	...	615 09
Almond Academy .....	2	17	67	113	6	1	5	18.7	6	...	41 47
Amsterdam Academy .....	8	30	55	214	14	6	8	17.6	14	...	96 75
Arcade Union School (Acad. Dept.) .....	7	43	...	192	11	1	10	17.3	11	...	70 02
Argyle Academy .....	40	35	15	76	18	5	13	15.7	18	...	124 40
Attica Union School (Acad. Dept.) .....	7	13	45	108	12	2	10	16.9	7	5	48 38
Auburn Academic High School .....	63	90	...	191	64	25	39	16.5	64	...	442 31
Augusta Academy .....	10	...	...	23	10	5	5	16.7	9	1	62 20
Aurora Academy .....	50	67	14	262	97	44	53	17.3	97	...	670 38

## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1878.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Baldwinsville Free Academy.....	29	49	28	176	42	16	26	16.1	42	...	\$290 26
Batavia Union School (Acad. Dept.).....	28	57	57	117	36	19	17	15.8	36	...	248 80
Binghamton Academy (Central High School).....	16	33	62	143	23	9	13	17.4	23	...	152 04
Black River Conference Seminary.....	11	32	26	150	19	12	7	18.1	18	1	124 40
Brookfield Academy.....	13	11	58	74	5	...	5	16.5	5	...	84 56
Brooklyn Collegiate and Polytechnic Institute.....	110	...	401	597	121	121	...	16.0	121	...	888 24
Buffalo Central School.....	106	158	65	944	120	89	81	16.1	120	...	829 33
Buffalo Female.....	...	63	60	159	...	...	...	...	...	...	...
Cambridge W. y.....	38	97	26	158	32	14	16	17.2	30	2	207 34
Canandaigua.....	84	47	53	213	50	50	...	18.5	49	1	388 64
Canastota Union School (Acad. Dept.).....	1	12	109	176	2	...	2	17.0	2	...	18 82
Candor Union School (Acad. Dept.).....	8	33	121	225	11	6	5	17.3	11	...	76 02
.....	7	33	60	137	10	6	4	19.2	9	1	62 20
..... cad. Dept.).....	25	28	60	187	63	88	25	17.0	85	28	241 90
..... Acad. Dept.).....	4	...	66	159	7	1	6	16.3	7	...	48 38
.....	13	4	96	165	23	12	10	17.5	22	...	152 04
Catskill Free Academy.....	21	21	...	60	26	9	17	16.0	25	1	172 78
Cayuga Lake Academy.....	5	63	139	90	6	8	8	17.7	6	...	41 47
Central New York Conference Seminary.....	90	79	68	457	117	77	40	20.3	117	...	808 60
Chamberlain Institute.....	25	30	105	290	44	20	24	17.8	44	...	304 06
Cincinnati Academy.....	6	20	20	70	9	4	5	18.1	7	2	48 88
Clarence Classical Union School.....	14	...	58	104	18	7	11	17.4	18	...	124 40

Claverack Academy and H. R. Institute	64	63	58	255	100	66	34	18.5	98	2	677	29
Clinton Grammar School (Female Dept.)	18	13	28	86	23	...	22	18.4	22	...	152	04
Clinton Liberal Institute	24	75	31	160	26	13	14	17.9	26	...	179	69
Corning Free Academy	58	9	20	117	71	26	45	16.5	71	...	490	70
Cortland Academy	11	44	76	263	20	8	12	18.2	20	...	188	23
Coxsackie Academy	2	14	37	98	5	1	4	17.8	4	1	27	64
Danville Seminary	14	25	26	108	23	13	10	16.9	23	...	158	95
	9	43	33	145	13	10	9	18.4	13	...	82	93
	54	37	39	251	119	77	42	17.7	116	8	801	69
	3	11	66	114	5	2	3	13.4	5	...	34	56
	5	18	28	133	15	8	7	14.8	7	8	48	38
to	46	49	40	89	7	4	3	17.8	7	...	48	38
	16	19	19	39	23	7	15	15.5	22	...	152	04
ad. Dept.)	14	15	15	23	23	12	11	18.4	23	...	158	95
Ellington Union School (Acad. Dept.)	18	...	66	158	42	5	37	17.7	42	...	230	26
Elmira Free Academy	57	69	...	149	61	18	43	10.2	52	9	359	38
Erasmus Hall Academy	...	31	50	95	...	...	...	...	...	...	...	...
Evans Academy	3	4	39	71	6	8	3	17.1	6	...	41	47
Fairfield Academy	20	...	54	131	33	25	9	18.6	30	8	207	33
	10	49	76	191	12	6	6	18.0	11	1	76	02
	50	28	59	206	84	35	49	17.4	84	...	580	53
	25	...	23	62	33	18	15	16.0	33	...	238	06
	36	62	30	530	67	44	23	20.0	66	1	456	14
Col. Institute	8	43	51	261	10	6	4	19.3	9	1	62	20
Franklin Academy, Malone	11	84	...	84	19	10	9	17.1	18	1	124	40
Franklin Academy, Prattsburgh	10	54	33	116	16	6	10	17.3	14	2	96	75
Friends' Academy	4	25	16	105	4	1	3	19.2	2	2	13	32
Friendship Academy	6	19	63	128	15	6	9	19.1	15	...	103	68
	9	27	25	106	23	11	11	17.6	15	7	103	68
	51	67	108	354	71	38	33	19.9	66	5	456	14
nary	3	20	52	131	14	3	13	17.5	14	...	96	75
	8	25	6	67	11	5	6	17.8	11	...	76	02
School	168	...	...	355	33	41	43	16.9	33	...	578	62
	7	33	29	120	10	1	9	17.3	10	...	69	11
Gilbertsville Academy	12	80	...	265	16	6	10	16.9	16	...	110	58
Glen's Falls	21	10	6	44	20	7	18	14.6	20	...	138	22
Gloversville	19	42	36	174	42	11	31	18.4	35	7	241	89
Gouverneur	10	28	16	56	15	15	...	21.6	15	...	108	67
Grammar B	26	9	24	45	5	2	8	15.6	5	...	34	56
Greenville Academy	...	...	...	...	...	...	...	...	...	...	...	...

## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERM.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1878.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Greenwich Union School (Acad. Dept.)	2	55	...	59	2	...	2	18.5	2	...	\$18 82
Griffith Institute	17	30	46	178	35	13	23	19.1	33	2	238 06
G.....	21	17	53	176	43	19	23	17.7	42	...	290 26
H.....	16	4	39	105	30	20	10	17.8	29	1	200 42
H.....	5	17	103	210	8	8	5	16.3	8	...	55 29
H.....	21	88	128	219	27	12	15	17.1	27	...	186 60
Holland Patent Union School (Acad. Dept.)	7	46	53	179	11	8	8	18.6	11	...	76 02
Holley Union School (Acad. Dept.)	19	54	129	253	25	4	31	18.0	24	1	165 86
Hoosick Falls Union School (Acad. Dept.)	12	18	43	120	15	7	8	16.3	15	...	103 67
Hudson Academy	15	18	71	133	27	16	11	16.4	27	...	186 60
Hungerford Collegiate Institute	33	97	57	276	59	38	26	17.3	59	1	400 85
Huntington Union School	27	85	...	65	23	5	17	16.0	23	...	153 04
Ithaca Academy	33	106	44	291	58	29	29	17.1	59	...	400 85
Jamestown Union School and Col. Institute	70	...	91	280	106	54	52	17.8	103	3	711 84
Johnstown Union School (Acad. Dept.)	...	...	...	57	13	10	3	17.8	13	...	89 84
Jordan Academy	30	33	21	154	44	10	84	17.0	43	1	297 17
Keeseville Academy	6	11	6	79	17	7	10	17.2	17	...	117 49
Kingston Academy	29	27	...	67	30	11	19	15.5	30	...	297 34
Lawrenceville Academy	16	33	18	132	30	8	22	18.4	29	1	200 42
Leavenworth Institute	8	41	104	221	13	4	9	17.0	12	1	82 94
Le Roy Academic Institute	20	150	...	260	33	22	11	17.8	33	...	228 06
Liberty Normal Institute	6	...	53	32	5	2	3	19.2	5	...	154 76

Lockport Union School.....	69	56	78	807	90	39	51	17.9	90	...	623 00
Lowville Academy.....	12	...	59	180	20	20	...	18.0	16	4	110 53
Lyons Union School.....	27	4	76	85	35	19	16	16.8	35	...	241 90
Macedon Academy.....	7	41	...	48	7	5	2	17.9	5	2	84 56
McGrawville Union School (Acad. Dept.).....	5	...	58	125	5	2	8	15.4	5	...	84 56
Marion Collegiate Institute.....	4	36	...	110	11	5	6	18.2	11	...	76 02
.....	2	5	48	90	5	2	8	17.0	4	1	27 64
Martin Institute.....	6	...	72	70	13	5	7	17.2	...	12	...
Maseena Union School (Acad. Dept.).....	2	...	23	48	4	1	8	...	4	...	27 64
Mayville Union School (Acad. Dept.).....	10	8	88	154	14	7	7	19.1	14	...	96 76
Mechanicville Academy.....	9	53	100	184	21	9	12	18.8	18	3	124 40
Medina Free Academy.....	16	...	98	76	25	8	17	15.2	21	4	145 14
.....	21	...	60	165	38	20	18	17.2	38	...	203 63
.....	11	22	26	114	20	6	14	17.1	20	...	183 22
.....	1	35	17	60	9	2	7	17.0	9	7	13 82
Dept.).....	8	42	85	176	16	6	10	17.2	16	...	110 59
Acad. Dept.).....	7	25	98	118	9	7	2	16.8	9	...	62 20
.....	30	24	27	141	57	26	31	18.0	57	...	398 94
.....	12	23	14	90	21	5	16	18.1	16	5	110 58
.....	2	10	51	87	4	8	1	16.5	4	...	27 64
Newark Union School and Academy.....	38	20	163	879	55	30	25	17.6	54	1	373 20
New Berlin Academy.....	42	9	69	197	82	48	39	18.1	82	...	506 71
New Paltz Academy.....	10	...	43	71	11	8	8	16.8	11	...	76 02
New York Conference Seminary.....	84	12	7	80	50	31	19	18.8	50	...	345 56
Norwich Academy.....	30	41	76	269	52	22	30	17.6	52	...	359 38
.....	30	50	40	197	26	13	18	17.2	26	...	179 69
.....	13	57	57	113	23	10	12	16.3	15	7	108 68
Institute.....	7	88	15	108	9	5	4	17.8	9	...	62 20
.....	14	25	80	169	21	10	11	14.8	18	8	124 40
.....	19	35	63	143	22	...	22	18.1	20	2	188 23
.....	32	16	49	189	40	12	28	16.8	40	...	276 44
Owego Free Academy.....	24	...	100	154	30	12	18	16.1	29	1	200 42
Oxford.....	28	16	64	160	48	19	29	18.0	48	2	317 91
Packer Institute.....	232	...	483	809	144	...	144	16.6	141	3	974 46
Palatine School.....	3	4	13	181	...	...	...	...	...	...	...
Palmyra Classical Union School.....	60	153	85	356	104	35	69	16.9	76	28	535 25
Peekskill Academy.....	...	27	11	50	...	...	...	...	...	...	...
Penn Yan Academy.....	111	7	93	192	36	14	22	16.1	36	...	243 80

## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1878.
	Academic scholars (those the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Perry Academy.....	13	52	36	150	23	12	11	17.6	22	1	\$152 04
Phelps Union and Classical School.....	16	31	118	242	21	4	17	16.3	21	...	145 14
Phipps Union Seminary.....	5	75	13	110	76	...	76	14.5	9	67	62 20
Pike Seminary.....	17	27	9	117	34	12	22	18.5	21	13	145 14
Plattsburgh High School ..	23	15	4	64	30	20	10	15.5	26	4	179 69
Pompey Academy.....	2	7	16	44	3	3	...	17.0	3	...	20 73
Port Byron Free School and Academy.....	7	17	156	241	12	5	7	17.0	11	1	76 02
Port Jervis Union School (Acad. Dept.).....	9	9	...	19	12	1	11	16.2	12	...	82 94
Pulaski Academy .....	34	21	45	188	72	37	35	17.6	72	...	497 60
Red Creek Union Academy.....	6	20	34	122	12	8	4	18.0	11	1	76 02
Rochester Female Academy.....	5	36	17	75	7	...	7	17.3	7	...	48 38
Rochester Free Academy.....	24	181	...	188	26	12	14	16.9	26	...	179 69
Rogersville Union Seminary .....	26	14	12	121	30	17	22	18.1	39	...	269 53
Rome Academy.....	39	...	60	121	44	21	23	16.7	44	...	304 08
Rural Seminary.....	20	23	83	123	31	14	17	18.2	31	...	214 24
Rushville Union School (Acad. Dept.).....	6	18	147	207	6	2	4	16.2	6	...	41 47
Sandy Hill Union School (Acad. Dept.).....	14	12	42	80	22	4	18	16.7	22	...	152 04
Saratoga Springs Union School (Acad. Dept.).....	5	105	...	157	9	4	5	16.2	9	...	62 20
Schenectady Union School (Acad. Dept.).....	19	83	...	115	23	7	16	16.8	23	...	158 95
Scholaric Academy .....	23	9	18	58	31	9	22	17.7	31	...	214 24

Seneca Falls Academy .....	16	58	55	177	90	4	16	17.1	20	...	138 22
Sherburne Union School (Acad. Dept.) .....	18	11	68	65	81	14	17	17.5	31	...	214 24
Skaneateles Union School (Acad. Dept.) .....	7	31	113	204	13	...	13	17.4	12	...	82 94
.....	44	27	37	203	84	52	32	18.1	73	11	504 51
.....	7	...	...	30	7	8	4	17.0	6	1	41 47
.....	1	7	45	98	1	...	1	18.0	1	...	6 91
Dept.) .....	16	90	...	180	82	18	14	19.1	28	4	193 51
.....	183	48	...	324	151	46	105	16.9	150	1	1,030 08
.....	55	62	43	204	95	46	40	19.9	95	...	656 56
.....	7	31	54	124	10	10	...	16.2	9	1	62 20
.....	44	99	62	226	57	...	57	17.2	57	...	393 94
.....	83	19	...	108	89	24	65	16.8	89	...	815 00
.....	6	12	26	91	7	2	5	18.2	7	...	48 98
.....	5	...	40	80	7	1	6	15.0	7	...	48 36
.....	6	27	25	185	16	7	9	18.1	14	2	96 75
.....	82	22	...	124	95	83	62	17.1	94	1	649 64
Unica Academy .....	8	8	13	...	3	2	1	16.6	3	...	20 73
Vernon Academy .....	10	...	195	237	16	6	10	17.4	10	...	110 58
Wallkill Academy .....	12	68	121	206	23	10	13	18.4	23	...	158 95
Walton Union School (Acad. Dept.) .....	14	2	41	106	16	5	11	17.3	14	2	96 75
Warrensburgh Academy .....	6	...	98	203	7	1	6	17.3	7	...	48 89
Warsaw Union School (Acad. Dept.) .....	8	24	...	44	9	2	7	16.0	9	...	62 20
Warwick Institute .....	63	22	...	209	83	34	48	17.8	82	...	566 71
Washington Academy .....	18	31	41	115	26	8	18	16.0	26	...	179 60
Waterford Union School (Acad. Dept.) .....	10	53	26	129	12	9	3	17.8	12	...	82 98
Waterloo Union School (Acad. Dept.) .....	89	83	...	193	56	39	27	16.6	56	1	390 12
Watertown High School .....	9	...	...	121	21	12	9	16.7	21	...	145 13
Watkins Academic Union School .....	20	...	61	...	20	5	15	16.8	20	...	138 22
Waverly Union School (Acad. Dept.) .....	11	19	50	...	14	6	8	16.9	14	...	96 75
.....	27	54	14	69	14	17	13	17.5	30	...	207 88
Westfield Union School (Acad. Dept.) .....	4	29	43	600	30	1	4	15.0	5	...	84 56
West Hebron Union School (Acad. Dept.) .....	2	54	54	182	5	13	16	16.0	2	26	13 82
Westport Union School (Acad. Dept.) .....	35	23	15	92	28	25	40	17.8	71	...	490 69
West Winfield Academy .....	57	164	35	183	71	55	89	18.3	86	6	594 35
Whitestown Seminary .....	28	...	...	465	94	23	27	17.2	50	...	345 56
Whitney's Point Union School (Acad. Dept.) .....	14	7	...	112	50	11	25	17.6	36	...	248 80
Wilson Union School (Acad. Dept.) .....	...	...	67	134	36	...	25	...	...	...	...



## SCHEDULE No. 3—(Continued).

NAMES OF	ATTENDANCE TERMS.		Number claimed to have pursued classical or higher English stu- dies, or both, for four months, or more, of said year.	SEX OF SCHOL- ARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1873.
	passed the P. A. exami- nation, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary stu- dies only).		Males.	Females.				
Windsor Union School (Ac	16	76	7	1	4	17.3	7	...	\$48 98
Woodhull Academy.....	21	45	27		8	18.9	25	2	172 78
Yates Academy.....	9	42	16		10	18.2	15	...	108 67
Yates Union School (Acad.	...	...	18	5	8	16.0	13	...	89 84
	4,647	6,256	31,421	2,729	3,894	17.8	5,788	340	\$40,888 00

Rate of apportionment in January, 1873..... \$4.31.

**SCHEDULE No. 4.**

*Showing the number of scholars who passed the preliminary academic examination in each academy during the years 1866-7, 1867-8, 1868-9, 1869-70, and 1870-71, 1871-72, and the total for these six years.*

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.			Total for six years, 1866-72.
						November, 1871.	February, 1872.	June 1872.	
Academy at Little Falls.....	4	22	30	14	18	1	.....	.....	89
Academy of Dutchess County.....	30	.....	.....	.....	.....	.....	.....	.....	30
Addison Union School (Acad. Dept.).....	.....	4	12	.....	.....	1	.....	.....	17
Adelphi Academy.....	.....	.....	.....	4	.....	4	.....	8	22
Afton Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	4	.....	12	20
Albany Academy.....	25	21	7	.....	.....	.....	.....	8	61
Albion Academy.....	53	76	19	25	20	10	.....	2	210
Alfred University (Acad. Dept.).....	12	50	31	21	16	6	.....	18	161
Almond Academy.....	.....	.....	.....	.....	3	.....	.....	2	5
Ames Academy.....	15	4	7	.....	8	.....	.....	.....	29
Amsterdam Academy.....	.....	2	20	7	7	.....	.....	1	39
Andes Collegiate Institute.....	17	18	16	8	.....	.....	.....	.....	54
Angelica Academy.....	29	23	5	.....	.....	.....	.....	.....	56
Angola Union School.....	.....	.....	.....	.....	1	.....	.....	3	7
Arcade Union School (Acad. Dept.).....	3	16	7	.....	11	7	.....	.....	45
Argyle Academy.....	49	.....	32	18	5	.....	.....	.....	104
Attica Union School (Acad. Dept.).....	28	14	9	2	.....	1	.....	.....	54
Auburn Academic High School.....	113	36	4	15	25	10	.....	27	230
Augusta Academy.....	.....	8	3	15	3	.....	.....	.....	30
Aurora.....	77	57	39	27	24	8	.....	7	262
Baldwin.....	22	14	9	17	16	12	.....	5	103
Batavia.....	24	15	9	6	11	5	.....	11	84
Binghamton Academy (Central High School).....	24	35	20	8	7	9	.....	3	106
Black River Conference Seminary.....	66	26	30	12	2	1	.....	2	149
Brookfield Academy.....	6	.....	7	.....	.....	4	.....	.....	17
Brooklyn College and Polytechnic Institute.....	23	39	.....	.....	.....	.....	.....	.....	62
Buffalo Central School.....	.....	.....	.....	35	58	30	.....	49	195

SCHEDULE No. 4—(Continued).

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.				Total for six years, 1866-72.
						November, 1871.	February, 1872.	June, 1872.	Total for 1871-72.	
Cambridge Washington Academy.....	10	17	23	21	8	5	5	5	15	88
Canajoharie Academy.....	11	16	.....	.....	.....	.....	.....	.....	.....	27
Canandaigua Academy.....	39	84	33	28	15	.....	7	11	18	166
Canastota Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	2	.....	2	2
Candor Union School (Acad. Dept.).....	.....	.....	.....	.....	9	.....	3	8	11	20
Canisteo Academy.....	.....	.....	.....	.....	.....	.....	1	1	2	2
Canton Union School (Acad. Dept.).....	10	18	36	17	6	2	9	12	23	105
Carthage Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	3	4	7	7
.....	18	23	17	9	2	3	4	3	10	74
.....	23	3	13	5	7	3	3	5	11	69
.....	.....	.....	7	13	.....	.....	2	.....	2	22
Cayuga Lake Academy.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Central N. Y. Conference Seminary (formerly Onelda Conference Seminary).....	38	57	55	19	17	3	7	11	21	207
Chamberlain Institute.....	19	42	26	11	5	6	4	7	17	120
Champlain Union School.....	14	30	22	4	1	.....	.....	.....	.....	71
Chester Union School (Acad. Dept.).....	10	24	5	10	2	1	.....	.....	1	52
Chill Seminary.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Christian Brothers' Academy.....	.....	.....	.....	.....	.....	.....	2	4	6	4
Cincinnati Academy.....	9	17	4	3	2	.....	.....	4	4	37
Clarence Classical Union School.....	13	14	17	1	1	.....	.....	2	3	59
Claverack Academy and H. K. Institute.....	111	85	118	36	41	2	3	8	13	440
Clinton Grammar School (Fem. Dept.).....	15	31	26	10	9	14	20	20	54	84
Clinton Liberal Institute (Male Dept.).....	28	9	31	31	1	2	1	.....	3	102
Clinton Liberal Institute (Fem. Dept.).....	.....	.....	12	1	1	.....	2	7	9	23
..... n School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
..... emy.....	28	26	56	23	21	5	3	5	18	167
.....	69	31	18	9	16	4	3	5	13	155
Cortlandville Academy.....	14	24	16	.....	.....	.....	.....	.....	.....	54
Coxsack Academy.....	10	.....	1	.....	.....	.....	3	1	3	14
Danville Seminary.....	31	19	37	15	7	4	4	2	10	112

Delaware Academy	14	10	11	3	5	2	1	1	1	4	47
Delaware Literary Institute	47	37	38	66	58	5	5	27	9	41	287
Deposit Academy		26	30	5	2						68
De Ruyter Institute	24	8	5	3	5						45
Dundee Academy	24					2	2	2	3	7	24
Dunkirk Union School (Acad. Dept.)											9
East Bloomfield Academy	26	30	15	7							78
East Genesee Conference Seminary	20	6	16	8	2						47
East Hammarick Friends' Institute											5
			15	5	1	2	3	3	2	5	36
			2	6	10	1	4	8	10	15	53
ool (Acad. Dept.)		28							2	7	56
Acad. Dept.)	15	11	2						6	30	190
	60	15	42	26	19				28	28	81
	11	5	8	4	3				5	18	154
	40	34	32	26	9	4	4		5	11	232
	32	38	59	20	13	3	5		3		10
	9		1								165
	35	18	38	16	9				14	49	118
	46	39	8		13					18	688
	177	132	121	51	34	6	6		6	18	11
					1						81
Col. Institute,			2	8	1				9	11	81
Franklin Academy, Malone	8	27	20	10	8	2					81
Franklin Academy, Prattsburgh	33	13	16	7	11						19
Fredonia Academy	19										27
	9		19	5		1				1	43
	8	19	6	8	2	1		2		3	70
	16	26	11	7	3			6	2	8	227
	56	64	46	15	10			7	8	16	17
	6							6	5	11	128
Genesee Academy	41	33	17	16	18	1		2	1	4	157
Geneva Classical and Union School	35	39	15	26	10	8		15	14	32	46
Gilbertsville Academy	17	6	8	1	2			4	8	12	84
Glen's Falls Academy	5	30	36	7	4				2	2	68
Gloversville	25				11	4		10	13	27	233
Gouverneur	118	25	34	23	20	5		4	4	18	92
Grammar School of Madison University	19	20	31	4	10	3		1	1	6	16
Greenville Academy	2		4	6	4						3
Greenwich Union School (Academic Dept.) (see											
Union Village Academy)											

## ACADEMIES.

SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERM		Scholars who have not passed the P. A. examination.	Scholars who have passed the P. A. examination, but who have not pursued higher studies.	Classical or higher English studies, or both, for four months, or more of said year.	M	F	Average age of scholars admitted.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apporportioned from the income of the literature fund in January, 1873.
	Academic scholars (those only who have passed the P. A. examination).	...									
Baldwinsville Free Academy.....	29	49	42	16	26	16.1	42	16.1	42	...	\$290 26
Batavia Union School (Acad. Dept.).....	23	57	36	19	17	15.8	36	15.8	36	...	248 80
Binghamton Academy (Central High School).....	16	33	22	9	13	17.4	22	17.4	22	...	152 04
Black River Conference Seminary.....	11	32	19	12	7	18.1	18	18.1	18	1	124 40
Brookfield Academy.....	13	11	5	...	5	16.5	5	16.5	5	...	34 56
Brooklyn Collegiate and Polytechnic Institute.....	110	...	121	121	...	16.0	121	16.0	121	...	886 24
Buffalo Central School.....	106	158	120	39	81	16.1	120	16.1	120	...	839 33
Buffalo Female Academy.....	...	63	...	...	...	...	...	...	...	...	...
Canastota Union School (Acad. Dept.).....	38	97	33	14	18	17.2	30	17.2	30	2	207 34
Candor Union School (Acad. Dept.).....	34	47	50	50	...	18.5	49	18.5	49	1	388 64
Canisteo Academy.....	1	12	2	...	2	17.0	2	17.0	2	...	13 82
Canton Union School (Acad. Dept.).....	8	32	11	6	5	17.3	11	17.3	11	...	76 02
Carthage Union School (Acad. Dept.).....	7	33	10	6	4	19.2	9	19.2	9	1	62 20
Cary Collegiate Seminary.....	25	28	63	38	25	17.0	35	17.0	35	28	241 90
Catskill Free Academy.....	4	...	7	1	6	16.8	7	16.8	7	...	48 38
Cayuga Lake Academy.....	13	4	23	12	10	17.5	22	17.5	22	...	152 04
Central New York Conference Seminary.....	21	21	26	9	17	16.0	25	16.0	25	1	172 76
Chamberlain Institute.....	5	63	6	8	8	17.7	6	17.7	6	...	41 47
Cincinnati Academy.....	90	79	117	77	40	20.3	117	20.3	117	...	809 80
Clarences Classical Union School.....	23	30	44	20	24	17.3	44	17.3	44	...	304 08
...	6	20	9	4	5	18.1	7	18.1	7	2	49 88
...	14	...	16	7	11	17.4	16	17.4	16	...	124 40

Claverack Academy and H. R. Institute	64	63	58	255	100	66	34	18.5	98	2	677 29
Clinton Grammar School (Female Dept.)	18	12	26	86	22	13	23	18.4	22	...	152 04
Clinton Liberal Institute	24	73	31	160	26	26	14	17.9	26	...	179 69
Corning Free Academy	53	9	20	117	71	26	45	16.5	71	...	490 70
Cortland Academy	11	44	76	203	20	8	12	18.2	20	...	188 23
Coxsackie Academy	3	14	37	93	5	1	4	17.8	4	1	27 64
Danville Seminary	14	23	26	106	23	13	10	16.9	23	...	158 95
.....	9	43	33	145	12	10	2	18.4	12	...	82 93
.....	54	87	30	251	119	77	42	17.7	116	3	801 69
.....	3	11	66	114	5	2	3	15.4	5	...	34 56
.....	5	18	26	138	15	8	7	14.8	7	8	46 38
.....	46	49	40	88	7	4	3	17.8	7	...	48 83
.....	16	19	19	39	22	7	15	15.5	22	...	152 04
Elizabethtown Union School (Acad. Dept.)	14	15	15	28	23	12	11	18.4	23	...	158 95
Ellington Union School (Acad. Dept.)	18	...	66	158	42	5	37	17.7	42	...	290 26
Elmira Free Academy	57	69	...	149	61	18	43	16.2	52	9	359 38
Erasmus Hall Academy	...	31	50	95	...	...	...	...	...	...	...
Evans Academy	3	4	30	71	6	3	3	17.1	6	...	41 47
Fairfield Academy	20	...	54	181	33	25	8	18.6	30	...	207 33
Fallev Seminary	10	49	76	191	12	6	6	18.0	11	1	76 02
.....	50	28	59	208	84	35	49	17.4	84	...	380 53
.....	25	...	23	62	33	18	15	16.0	33	...	228 06
.....	86	62	30	530	67	44	23	20.0	65	1	456 14
.....	8	43	51	261	10	6	4	19.3	9	1	62 20
Col. Institute	11	34	...	84	10	10	9	17.1	18	1	124 40
Franklin Academy, Malone	10	54	88	116	16	6	10	17.3	14	2	96 75
Franklin Academy, Prattsburgh	4	25	16	105	4	1	3	19.2	2	2	18 82
.....	6	10	63	128	15	6	9	19.1	15	...	108 68
.....	9	27	35	106	23	11	11	17.6	15	7	108 68
.....	51	67	108	354	71	38	33	19.9	66	5	456 14
.....	2	20	52	121	14	2	12	17.5	14	...	94 75
.....	8	25	6	67	11	5	6	17.8	11	...	76 02
.....	163	...	...	355	83	41	42	16.9	83	...	573 62
.....	7	83	29	120	10	1	9	17.2	10	...	69 11
Glen's Falls	12	80	...	235	16	6	10	16.9	16	...	110 58
Gloversville	21	10	6	44	20	7	13	14.6	20	...	188 23
Gouverneur	19	42	36	174	42	11	31	18.4	35	7	241 59
Grammar Sch	10	28	16	56	15	15	...	21.6	15	...	106 67
Greenville Academy	26	9	24	45	5	2	3	15.8	5	...	34 56

## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English etc., or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1878.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Greenwich Union School (Acad. Dept.)	2	55	58	58	2	18	2	18.5	2	2	\$13 82
Griffith Institute	17	20	178	178	35	18	23	19.1	33	2	228 06
Griffith Academy	21	17	176	176	42	19	23	17.7	42	1	290 26
Hs	16	4	105	105	30	20	10	17.8	29	1	200 42
Hs	5	17	210	210	8	8	5	16.8	8	1	55 20
Hs	21	88	219	219	27	12	15	17.1	27	1	186 60
Holland Patent Union School (Acad. Dept.)	7	46	179	179	11	3	8	18.6	11	1	76 02
Holley Union School (Acad. Dept.)	19	54	253	253	25	4	21	18.0	24	1	165 86
Hoosick Falls Union School (Acad. Dept.)	12	18	120	120	15	7	8	16.8	15	1	103 67
Hudson Academy	15	18	193	193	27	16	11	16.4	27	1	186 60
stitute	38	67	276	276	59	33	26	17.8	58	1	400 85
stitute	27	35	65	65	23	5	17	16.0	22	1	152 04
stitute	93	106	291	291	58	29	29	17.1	58	1	400 85
Jamestown Union School and Col. Institute	70	...	290	290	106	54	52	17.8	108	8	711 84
Johnston Union School (Acad. Dept.)	...	...	57	57	13	10	8	17.8	13	1	80 84
Jordan Academy	30	33	154	154	44	10	34	17.0	43	1	297 17
Keeseville Academy	6	11	79	79	17	7	10	17.2	17	1	117 40
Kingston Academy	29	37	67	67	30	11	19	16.5	30	1	207 84
Lawrenceville Academy	16	33	183	183	30	8	22	18.4	29	1	200 42
Leavenworth Institute	8	41	221	221	18	4	9	17.0	12	1	82 94
Le Roy Academic Institute	20	150	250	250	33	22	11	17.8	33	1	228 06
Liberty Normal Institute	6	3	42	42	5	2	3	19.2	5	1	34 54

Lockport Union School.....	69	56	78	307	90	39	51	17.9	90	....	623 00
Lowville Academy.....	12	....	59	180	20	20	....	18.0	16	4	110 58
.....	27	4	76	35	35	19	16	16.8	35	3	241 90
.....	7	41	....	48	7	5	3	17.9	5	....	84 58
.....	5	....	58	125	5	2	3	15.4	5	....	84 58
.....	4	36	....	110	11	5	6	18.2	11	....	76 02
.....	3	5	48	90	5	3	3	17.0	4	1	27 64
.....	6	....	72	70	13	5	7	17.2	....	12	....
.....	8	....	23	48	4	1	3	....	4	....	27 64
.....	10	8	83	154	14	7	7	19.1	14	....	96 76
.....	8	59	100	184	21	9	12	18.8	18	3	124 40
.....	16	....	28	76	25	8	17	15.2	21	4	145 14
.....	31	....	60	105	38	20	18	17.2	38	....	282 02
.....	11	22	26	114	20	6	14	17.1	20	....	198 22
.....	1	35	17	60	9	2	7	17.0	2	7	18 82
.....	8	42	35	176	16	6	10	17.2	16	....	110 58
.....	7	25	88	118	9	7	2	16.3	9	....	62 20
.....	30	24	27	141	57	26	31	18.0	57	....	898 94
.....	12	23	14	90	21	5	16	18.1	16	5	110 58
.....	2	10	51	87	4	8	1	16.5	4	....	27 64
.....	38	20	163	379	55	30	25	17.6	54	1	373 20
.....	42	9	69	197	82	48	39	19.1	82	....	536 71
.....	10	....	42	71	11	6	8	16.8	11	....	76 02
.....	34	13	7	80	50	31	19	18.8	50	....	845 56
.....	30	41	76	269	52	22	30	17.6	52	....	859 38
.....	20	50	40	197	26	18	18	17.2	26	....	179 69
.....	18	57	57	112	23	10	12	16.3	15	7	108 68
.....	7	33	15	106	9	5	4	17.8	9	....	63 20
.....	14	25	89	169	21	10	11	14.8	18	3	124 40
.....	19	35	63	143	22	....	22	18.1	20	2	188 22
.....	32	16	49	189	40	12	23	16.8	40	....	276 44
.....	24	....	100	154	30	12	18	16.1	29	1	200 42
.....	28	16	64	160	48	19	29	18.0	48	2	317 21
.....	282	....	432	809	144	....	144	16.6	141	3	974 46
.....	3	4	13	181	....	....	....	....	....	....	....
.....	60	153	35	256	104	35	69	16.9	76	28	525 25
.....	....	27	11	50	....	....	....	....	....	....	....
.....	111	7	93	192	86	14	22	16.1	86	....	248 80



SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERM.		Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS WHO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1873.
	Academic scholars (those only who have passed the F. A. examination).	Scholars who have not passed the F. A. examination, but who have pursued higher studies.			Males.	Females.				
Perry Academy.....	18	52	150	23	12	11	17.0	22	1	\$152 04
Phelps Union and Classical School.....	16	31	242	21	4	17	16.3	21	...	145 14
Phineas Union Seminary.....	5	75	110	76	...	76	14.5	0	67	62 20
.....	17	27	117	34	12	22	18.5	21	13	145 14
.....	23	15	64	30	20	10	15.5	26	4	179 69
.....	2	7	44	3	3	...	17.0	3	...	20 73
..... and Academy.....	7	17	241	12	6	7	17.0	11	1	76 02
Port Jervis Union School (Acad. Dept.).....	9	0	10	12	1	11	16.2	12	...	82 94
Pulaski Academy.....	34	21	186	72	37	35	17.6	72	...	497 60
Red Creek Union Academy.....	6	20	132	12	8	4	18.0	11	1	76 02
Rochester Female Academy.....	5	36	75	7	...	7	17.3	7	...	48 38
Rochester Free Academy.....	24	131	186	26	12	14	16.9	26	...	179 69
Rogersville Union Seminary.....	26	14	121	30	17	22	18.1	39	...	269 53
Rome Academy.....	30	...	121	44	31	23	16.7	44	...	304 06
Rural Seminary.....	20	28	123	31	14	17	18.2	31	...	214 24
Rushville Union School (Acad. Dept.).....	0	18	207	6	2	4	16.2	6	...	41 47
..... Dept.).....	14	12	80	22	4	18	16.7	22	...	153 04
..... (Acad. Dept.).....	5	105	157	9	4	5	16.2	9	...	62 20
..... (Acad. Dept.).....	10	83	115	23	7	16	16.8	23	...	158 95
.....	23	9	68	31	9	22	17.7	31	...	214 24

Seneca Falls Academy.....	16	58	55	177	20	4	16	17.1	20	.....	188 23
Sherburne Union School (Acad. Dept.).....	18	11	68	65	31	14	17	17.5	31	.....	214 24
Skaneateles Union School (Acad. Dept.).....	7	31	118	204	13	.....	13	17.4	13	.....	32 94
Sodus Academy.....	44	27	37	208	94	52	32	18.1	73	11	504 51
Spencertown Academy.....	7	.....	.....	30	7	3	4	17.0	6	1	41 47
(Fem. Dept.).....	1	7	45	98	1	.....	1	18.0	1	.....	6 91
.....	16	90	.....	180	32	18	14	10.1	28	4	193 51
.....	133	43	.....	224	151	46	105	16.9	150	1	1,086 08
Ten Broeck Free Academy.....	55	62	43	204	95	46	40	19.9	95	.....	656 55
.....	7	31	54	124	10	10	.....	16.2	9	1	62 20
.....	44	99	52	226	57	.....	57	17.2	57	.....	393 94
.....	83	19	.....	108	89	24	65	10.8	89	.....	615 09
.....	6	12	28	91	7	2	5	18.2	7	.....	48 38
.....	5	.....	40	80	7	1	6	15.0	7	.....	48 38
ville.....	6	27	25	135	16	7	9	13.1	14	2	96 75
.....	93	22	.....	124	95	33	63	17.1	94	1	649 04
vern Academy.....	3	8	13	.....	3	2	1	16.6	3	.....	20 78
Wallkill.....	16	.....	195	287	16	6	10	17.4	16	.....	110 58
Walton (Dept.).....	13	63	131	206	23	10	13	18.4	23	.....	158 95
Warrens.....	14	3	41	106	16	5	11	17.3	14	2	96 75
Warsaw.....	6	.....	93	206	7	1	6	17.3	7	.....	48 38
Warwick Institute.....	8	24	.....	44	9	2	7	16.0	9	.....	62 20
Washington Academy.....	63	23	65	209	32	34	48	17.3	33	.....	566 71
Waterford (d. Dept.).....	18	31	41	115	26	8	18	16.0	26	.....	179 69
Waterloo U. (Dept.).....	10	53	23	129	12	9	3	17.3	13	.....	89 98
Watertown High School.....	39	33	.....	193	56	29	27	16.6	55	1	380 13
Watkins Academic Union School.....	9	.....	61	131	21	13	9	16.7	21	.....	145 13
Waverly Union School (Acad. Dept.).....	20	.....	50	.....	20	5	15	16.3	20	.....	138 23
.....	11	19	14	69	14	6	8	16.9	14	.....	96 75
westfield Union School (Acad. Dept.).....	27	34	43	600	30	17	13	17.5	30	.....	207 33
West Hebron Union School (Acad. Dept.).....	4	29	54	132	5	1	4	15.0	5	.....	84 56
Westport Union School (Acad. Dept.).....	3	54	15	92	26	13	16	16.0	3	26	13 32
West Winfield Academy.....	35	23	35	183	71	25	46	17.3	71	.....	490 69
Whitestown Seminary.....	57	164	.....	465	94	55	39	16.3	86	6	594 35
Whitney's Point Union School (Acad. Dept.).....	28	.....	.....	112	50	23	27	17.2	50	.....	345 56
Wilson Union School (Acad. Dept.).....	14	7	67	134	36	11	25	17.6	36	.....	243 80

## SCHEDULE No. 3—(Continued).

NAMES OF ACAD.	ATTENDANCE TERMS.		Whole number of scholars during the year.	Number claimed to have pursued classical or higher English stu- dies, or both, for four months, or more, of said year.	SEX OF SCHOL- ARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1872.
	passed the P. A. exami- nation, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary stu- dies only).			Males.	Females.				
Windeor Union School (Acad. D	16	76	149		1	4	17.8		2	\$48 88
Woodhull Academy.....	21	45	274			8	18.9			173 78
Yates Academy.....	9	42	90		5	10	18.2			108 67
Yates Union School (Acad. Dep.....			88			8	16.0			89 84
	4,647	6,356	81,431	6,133	2,739	8,394	17.3	5,783	340	\$40,000 00

Rate of apportionment in January, 1872..... \$6.91.

**SCHEDULE No. 4:**

*Showing the number of scholars who passed the preliminary academic examination in each academy during the years 1866-7, 1867-8, 1868-9, 1869-70, and 1870-71, 1871-72, and the total for these six years.*

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.				Total for six years, 1866-72.
						November, 1871.	February, 1872.	June, 1872.	Total for 1871-72.	
Academy at Little Falls.....	4	22	30	14	18	.....	1	.....	1	80
Academy of Dutchess County.....	30	.....	.....	.....	.....	.....	.....	.....	.....	30
Addison Union School (Acad. Dept.).....	.....	4	12	.....	.....	.....	1	.....	1	17
Adelphi Academy.....	.....	.....	.....	4	.....	6	4	8	16	23
Afton Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	4	4	12	20	30
.....	25	21	7	.....	.....	.....	.....	8	8	61
.....	53	76	19	25	20	5	10	2	17	210
.....	12	50	31	21	16	12	6	13	31	161
.....	.....	.....	.....	.....	8	.....	.....	2	2	5
.....	15	4	7	.....	8	.....	.....	.....	.....	29
.....	.....	2	20	7	7	2	.....	1	.....	39
.....	17	18	16	8	.....	.....	.....	.....	.....	54
.....	29	23	5	.....	.....	.....	.....	.....	.....	56
.....	.....	.....	.....	.....	1	1	3	8	6	7
.....	3	16	7	.....	11	1	7	.....	8	45
.....	49	.....	32	18	5	.....	.....	.....	.....	104
.....	23	14	9	2	.....	.....	1	.....	1	54
.....	118	36	4	15	25	.....	10	27	87	280
.....	.....	8	3	15	3	1	.....	.....	1	30
.....	77	57	30	27	24	28	6	7	38	263
.....	23	14	9	17	16	8	12	5	25	103
.....	24	15	9	6	11	3	5	11	19	84
.....	24	35	30	8	7	.....	9	3	12	106
.....	66	26	30	12	2	1	1	2	4	140
.....	6	.....	7	.....	.....	.....	4	.....	4	17
.....	23	39	.....	.....	.....	.....	.....	.....	.....	63
.....	.....	.....	.....	35	53	.....	30	49	103	195

## SCHEDULE No. 3—(Continued).

NAMES OF	AS ATTENDANCE IS TAKEN.		Whole number of scholars during the year.	Number claimed to have pursued classical or higher English stu- dies, or both, for four months, or more, of said year.	SEX OF SCHOL- ARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1873.
	Scholars who have not passed the P. A. exami- nation, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary stu- dies only).			Males.	Females.				
Windsor Union School (Acad. Dept.)	7	76	149	7	1	4	17.3	7	...	\$48 98
Woodhull Academy	23	45	274	27	1	8	18.9	25	2	173 78
Yates Academy	5	43	99	15	5	10	18.2	15	...	103 67
Yates Union School (Acad. Dept.)	11	...	58	18	5	8	16.0	13	...	89 84
	4,647	10,236	81,431	6,123	3,739	3,394	17.3	5,788	340	\$40,000 00

Rate of apportionment in January, 1873.

\$6.91.

# SCHEDULE No. 4.

*Showing the number of scholars who passed the preliminary academic examination in each academy during the years 1866-7, 1867-8, 1868-9, 1869-70, and 1870-71, 1871-72, and the total for these six years.*

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.		Total for six years, 1866-72.
						November, 1871.	February, 1872.	
Academy at Little Falls.....	4	32	30	14	18	.....	1	89
Academy of Dutchess County.....	30	.....	.....	.....	.....	.....	.....	30
Addison Union School (Acad. Dept.).....	.....	4	12	.....	.....	.....	1	17
Adelphi Academy.....	.....	.....	.....	4	.....	6	18	23
Afton Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	4	20	20
Albany Academy.....	25	31	7	.....	.....	.....	8	61
.....	53	76	19	25	20	5	10	210
..... (dept.).....	12	50	31	21	16	12	6	161
.....	.....	.....	.....	.....	3	.....	.....	5
.....	15	4	7	.....	3	.....	.....	28
.....	.....	2	20	7	7	2	.....	39
.....	17	18	16	3	.....	.....	.....	54
.....	29	22	5	.....	.....	.....	.....	56
.....	.....	.....	.....	.....	1	1	2	7
Angola Union School.....	3	16	7	.....	11	.....	7	45
Arcade Union School (Acad. Dept.).....	49	.....	32	18	5	.....	.....	104
Argyle Academy.....	28	14	9	3	.....	.....	.....	54
Attica Union School (Acad. Dept.).....	118	36	4	15	25	.....	10	230
Auburn Academic High School.....	.....	8	3	15	3	1	.....	30
Augusta Academy.....	77	57	30	27	24	23	8	262
Aurora Academy.....	22	14	9	17	16	8	12	103
Baldwinsville Free Academy.....	24	15	9	6	11	3	5	84
Batavia Union School (Acad. Dept.).....	24	35	20	8	7	.....	9	106
Binghamton Academy (Central High School).....	66	26	30	12	2	1	1	140
Black River Conference Seminary.....	6	.....	7	.....	.....	.....	4	17
Brookfield Academy.....	23	39	.....	.....	.....	.....	.....	62
Brooklyn College and Polytechnic Institute.....	.....	.....	.....	35	58	23	30	193
Buffalo Central School.....	.....	.....	.....	.....	.....	.....	.....	.....

## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1878.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Baldwinsville Free Academy.....	29	49	28	176	43	16	25	16.1	43	...	\$290 26
Batavia Union School (Acad. Dept.).....	28	57	57	117	36	19	17	15.8	36	...	248 80
Binghamton Academy (Central High School).....	16	33	63	143	23	9	13	17.4	23	...	152 04
Black River Conference Seminary.....	11	32	26	150	19	12	7	18.1	18	1	124 40
Brookfield Academy.....	13	11	53	74	5	...	5	16.5	5	...	94 58
Brooklyn Collegiate and Polytechnic Institute.....	110	...	401	597	121	121	...	16.0	121	...	886 24
Buffalo Central School.....	106	158	65	344	120	39	81	16.1	120	...	829 38
Buffalo Female Academy.....	...	63	69	159	...	...	...	...	...	...	...
Cambridge Washington Academy.....	38	97	26	158	32	14	18	17.2	30	2	207 34
Canandaigua Academy.....	84	47	53	218	50	50	...	18.5	49	1	388 04
Canastota Union School (Acad. Dept.).....	1	12	109	176	2	...	2	17.0	2	...	13 82
Candor Union School (Acad. Dept.).....	8	32	121	225	11	6	5	17.3	11	...	76 02
Canistota Academy.....	7	33	60	137	10	6	4	19.2	9	1	62 20
Dept.).....	25	28	60	187	63	38	25	17.0	85	28	241 90
1 Dept.).....	4	...	66	159	7	1	6	16.3	7	...	48 88
Dept.).....	13	4	96	165	22	12	10	17.5	22	...	152 04
Catskill Free Academy.....	21	21	...	60	26	9	17	16.0	25	1	172 78
Cayuga Lake Academy.....	5	63	189	90	6	3	8	17.7	6	...	41 47
Central New York Conference Seminary.....	90	79	68	457	117	77	40	20.3	117	...	808 60
Chamberlain Institute.....	23	30	105	290	44	20	24	17.3	44	...	804 08
Cincinnati Academy.....	6	20	20	70	9	4	5	18.1	7	2	46 88
Clarence Classical Union School.....	14	...	58	104	18	7	11	17.4	18	...	124 40





## SCHEDULE No. 8—(Continued).

NAMES OF ACADEMIES.	AVERAGES ATTENDANCE BY TERMS.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1872.
	Academic scholars (those who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Greenwich Union School (Acad. Dept.)	2	55	46	58	2	13	2	18.5	2	2	\$13 82
Griffith Institute	17	20	53	176	35	19	22	19.1	33	2	228 06
Groton Academy	21	17	39	176	42	20	23	17.7	42	1	290 26
	16	4	103	105	30	3	10	17.8	29	1	200 43
	5	17	128	210	8	8	5	16.3	8	1	55 29
	21	88	128	179	27	12	15	17.1	27	1	186 60
	7	46	53	179	11	3	8	18.6	11	1	76 02
	19	54	129	253	25	4	21	18.0	24	1	165 86
	12	18	43	130	15	7	8	16.8	15	1	108 67
	15	18	71	133	27	16	11	16.4	27	1	186 60
	38	67	57	276	59	33	26	17.3	58	1	400 85
	27	35	44	65	23	5	17	16.0	23	1	152 04
	33	106	91	291	58	29	29	17.1	58	1	400 85
Jamestown Union School and Col. Institute	70	...	...	280	106	54	52	17.8	108	8	711 84
Johnstown Union School (Acad. Dept.)	...	...	...	57	13	10	8	17.8	13	1	89 84
Jordan Academy	30	88	21	154	44	10	34	17.0	43	1	287 17
	6	11	6	79	17	7	10	17.2	17	1	117 40
	29	27	...	67	30	11	19	15.5	30	1	207 34
Leavenworth Institute	16	83	18	182	30	8	22	18.4	29	1	300 43
Le Roy Academic Institute	8	41	104	221	13	4	9	17.9	12	1	82 84
Liberty Normal Institute	20	156	...	250	33	22	11	17.3	33	1	238 06
	5	3	53	42	5	2	3	19.2	5	1	34 53

Lockport Union School.....	69	56	78	307	90	39	51	17.9	90	...	622 00
Lowville Academy.....	13	...	59	130	20	20	...	18.0	16	4	110 58
Lyons Union School.....	27	4	76	35	35	19	16	16.8	85	...	241 90
Macedon Academy.....	7	41	...	48	7	5	2	17.9	5	2	84 56
McGrawville Union School (Acad. Dept.).....	5	...	59	125	5	2	3	15.4	5	...	34 56
Marion Collegiate Institute.....	4	36	...	110	11	5	6	18.2	11	...	76 02
ston .....	3	5	48	90	5	2	3	17.0	4	1	27 64
.....	6	...	72	70	12	5	7	17.2	...	12	...
Massena Union School (Acad. Dept.).....	2	...	22	43	4	1	3	...	4	...	27 64
Mayville Union School (Acad. Dept.).....	10	8	83	154	14	7	7	19.1	14	...	96 76
.....	9	56	100	184	21	9	12	18.8	18	3	124 40
.....	16	...	28	76	25	8	17	15.2	21	4	145 14
.....	21	...	60	165	38	20	18	17.2	38	...	262 02
.....	11	32	26	114	30	6	14	17.1	30	...	138 22
.....	1	35	17	60	9	2	7	17.0	2	7	18 82
Dept.).....	8	42	25	176	16	6	10	17.2	16	...	110 58
Mount Morris Union School (Acad. Dept.).....	7	25	38	113	9	7	3	16.3	9	...	62 20
Munro Collegiate Institute.....	30	24	27	141	57	26	31	18.0	57	...	398 94
Naples Academy.....	12	23	14	90	21	5	16	18.1	16	5	110 58
Nassau Academy.....	2	10	51	87	4	3	1	16.5	4	...	27 64
Newark Union School and Academy.....	38	20	163	379	55	30	25	17.6	54	1	378 20
New Berlin Academy.....	42	9	69	197	82	43	39	18.1	82	...	586 71
New Paltz Academy.....	10	...	42	71	11	8	3	16.8	11	...	76 02
New York Conference Seminary.....	34	12	7	80	50	31	19	18.8	50	...	345 56
Norwich Academy.....	30	41	76	369	52	22	20	17.6	52	...	359 38
Institute.....	20	50	40	197	26	13	13	17.2	26	...	179 69
.....	18	57	57	112	22	10	12	16.3	15	7	103 68
.....	7	38	15	108	9	5	4	17.8	9	...	62 20
.....	14	25	89	169	31	10	11	14.8	18	3	124 40
.....	19	35	63	143	22	...	22	18.1	20	2	138 22
.....	33	16	49	189	40	12	28	16.8	40	...	276 44
Owego Free Academy.....	24	...	100	154	30	12	18	16.1	29	1	200 42
Oxford Academy.....	26	16	64	160	48	19	29	18.0	46	2	317 91
Packer Collegiate Institute.....	233	...	432	809	144	...	144	16.6	141	3	974 46
Palatine Bridge Union School.....	3	4	13	131	...	...	...	...	...	...	...
Palmyra Classical Union School.....	90	153	25	356	104	35	69	16.9	76	28	525 25
Peekskill Academy.....	...	27	11	50	...	...	...	...	...	...	...
Penn Yan Academy.....	111	7	93	192	36	14	23	16.1	36	...	243 80

## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.			Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1873.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).			Males.	Females.				
Perry Academy.....	13	52	36	130	23	12	11	17.6	22	1	\$132 04
Phelps Union and Classical School.....	16	81	118	242	31	4	17	16.8	21	...	145 14
Phippa Union Seminary.....	5	75	13	110	76	...	76	14.5	9	67	62 30
.....	17	27	0	117	84	12	22	18.5	21	18	145 14
..... of ..	23	15	4	64	30	20	10	15.5	26	4	179 69
.....	2	7	16	44	3	3	...	17.0	3	...	20 73
..... and Academy.....	7	17	156	241	12	5	7	17.0	11	1	76 03
..... ol (Acad. Dept.).....	9	0	...	19	12	1	11	16.2	12	...	82 94
Pulaski Academy.....	34	21	45	188	72	87	35	17.6	72	...	497 60
ited Creek Union Academy.....	6	20	34	123	12	8	4	18.0	11	1	76 03
Rochester Female Academy.....	5	36	17	75	7	...	7	17.3	7	...	48 36
Rochester Free Academy.....	24	181	...	188	26	12	14	16.9	26	...	179 69
Rogersville Union Seminary.....	26	14	12	121	30	17	22	18.1	39	...	269 53
Rome Academy.....	20	...	60	121	44	21	23	16.7	44	...	304 06
Rural Seminary.....	20	28	88	123	31	14	17	18.3	31	...	214 24
Rushville Union.....	6	18	147	207	6	2	4	16.2	6	...	41 47
Sandy Hill Uni.....	14	12	42	90	23	4	18	16.7	23	...	162 04
Saratoga Spring.....	5	105	...	157	0	4	5	16.3	9	...	63 20
Schenectady U.....	19	83	...	115	23	7	16	16.8	23	...	168 95
St. Charles Academy.....	23	0	18	58	31	0	22	17.7	31	...	214 24

Beneca Falls Academy.....	16	58	55	177	90	4	16	17.1	20	....	138 23
Sherburne Union School (Acad. Dept.).....	18	11	68	65	31	14	17	17.5	31	....	214 24
Skaneateles Union School (Acad. Dept.).....	7	31	113	304	12	....	12	17.4	12	....	82 94
Sodus Academy.....	44	27	37	303	34	52	32	18.1	73	11	504 51
Spencertown Academy.....	7	....	....	30	7	3	4	17.0	6	1	41 47
Dept.).....	1	7	45	98	1	....	1	18.0	1	....	6 91
.....	16	90	....	180	32	18	14	19.1	28	4	193 51
.....	183	48	....	224	151	43	105	18.9	150	1	1,036 03
.....	55	62	43	294	95	46	49	19.9	95	....	656 56
.....	7	31	54	124	10	10	....	16.2	9	1	62 20
.....	44	99	52	226	57	....	57	17.2	57	....	393 94
.....	88	19	....	108	89	24	65	16.8	89	....	615 09
.....	6	12	20	91	7	2	5	18.2	7	....	48 98
.....	5	....	49	80	7	1	6	15.0	7	....	48 88
Union Academy of Belleville.....	6	27	25	135	16	7	9	18.1	14	2	96 73
Utica Academy.....	62	23	....	124	95	83	62	17.1	94	1	649 64
.....	3	8	13	....	3	3	1	16.6	3	....	20 78
.....	16	....	195	237	10	6	10	17.4	16	....	110 58
Dept.).....	12	03	131	206	23	10	13	18.4	23	....	158 95
.....	14	2	41	106	16	5	11	17.8	14	3	96 75
Dept.).....	6	....	93	296	7	1	6	17.3	7	....	48 88
.....	8	24	....	44	9	2	7	16.0	9	....	62 20
Washington Academy.....	63	22	65	200	82	34	48	17.3	82	....	566 71
Waterford Union School (Acad. Dept.).....	18	31	41	115	26	8	18	16.0	26	....	179 69
Waterloo Union School (Acad. Dept.).....	10	52	33	129	12	9	8	17.3	12	....	82 93
Watertown High School.....	39	83	....	193	56	29	27	16.6	55	1	380 12
Watkins Academic Union School.....	9	....	61	131	21	12	9	16.7	21	....	145 18
Waverly Union School (Acad. Dept.).....	20	....	50	....	20	5	15	16.3	20	....	133 23
.....	11	19	14	69	14	6	8	16.9	14	....	96 75
Westfield Union School (Acad. Dept.).....	27	54	42	600	30	17	18	17.5	30	....	207 33
West Hebron Union School (Acad. Dept.).....	4	23	54	182	5	1	4	15.0	5	....	84 56
Westport Union School (Acad. Dept.).....	2	54	15	92	98	12	16	16.0	2	26	13 82
West Winfield Academy.....	85	23	35	183	71	25	40	17.3	71	....	490 69
Whitestown Seminary.....	57	164	....	465	94	55	39	18.3	86	8	594 35
Whitney's Point Union School (Acad. Dept.).....	28	....	....	112	50	23	27	17.2	50	....	345 56
Wilson Union School (Acad. Dept.).....	14	7	67	134	36	11	25	17.6	36	....	248 90

## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERM.				Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1873.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).				Males.	Females.				
Windsor Union School (Acad. Dept.)	7	16	76	149	7	4	1	4	17.8	2	2	\$48 38
Woodhull Academy	23	21	45	274	27	8	1	8	18.9			173 78
Yates Academy	5	9	43	98	15	10		10	18.2			108 67
Yates Union School (Acad. Dept.)	11	....	....	58	13	8	5	8	16.0			89 84
	4,647	6,256	10,236	81,421	6,123	3,894	2,729	3,894	17.3	5,788	340	\$40,000 00

Rate of apportionment in January, 1873..... \$6.91.

# SCHEDULE No. 4.

*Showing the number of scholars who passed the preliminary academic examination in each academy during the years 1866-7, 1867-8, 1868-9, 1869-70, and 1870-71, 1871-72, and the total for these six years.*

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.			Total for six years, 1866-72.
						November, 1871.	February, 1872.	June, 1872.	
Academy at Little Falls.....	4	22	30	14	18	.....	1	....	89
Academy of Dutchess County.....	30	.....	.....	.....	.....	.....	.....	....	30
Addison Union School (Acad. Dept.).....	.....	4	12	.....	.....	.....	1	....	17
Adelphi Academy.....	.....	.....	.....	4	.....	6	4	8	22
Afton Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	4	4	12	20
Albany Academy.....	25	21	7	.....	.....	.....	.....	8	61
Albion Academy.....	53	76	19	25	20	5	10	2	210
Alfred University (Acad. Dept.).....	12	50	31	21	16	12	6	13	161
Almond Academy.....	.....	.....	.....	.....	3	.....	.....	2	5
Ames Academy.....	15	4	7	.....	3	.....	.....	....	29
Amsterdam Academy.....	.....	2	20	7	7	2	.....	1	39
Andes Collegiate Institute.....	17	18	16	8	.....	.....	.....	....	54
Angelica Academy.....	29	22	5	.....	.....	.....	.....	....	56
Angola Union School.....	.....	.....	.....	.....	1	1	2	3	7
Arcade Union School (Acad. Dept.).....	3	16	7	.....	11	1	7	....	45
Argyle Academy.....	49	.....	32	18	5	.....	.....	....	104
Attica Union School (Acad. Dept.).....	28	14	9	2	.....	.....	1	....	54
Auburn Academic High School.....	118	36	4	15	25	.....	10	27	230
Augusta Academy.....	.....	8	3	15	3	1	.....	....	30
Aurora Academy.....	77	57	39	27	24	23	8	7	262
Baldwinsville Free Academy.....	22	14	9	17	16	8	12	5	103
Batavia Union School (Acad. Dept.).....	24	15	9	6	11	3	5	11	84
Binghamton Academy (Central High School).....	24	35	20	8	7	.....	9	3	106
Black River Conference Seminary.....	66	26	30	12	2	1	1	2	140
Brookfield Academy.....	6	.....	7	.....	.....	.....	4	....	17
Brooklyn College and Polytechnic Institute.....	23	39	.....	.....	.....	.....	.....	....	62
Buffalo Central School.....	.....	.....	.....	35	58	23	30	49	195

## ACADEMIES.

SCHEDULE No. 4—(Continued).

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.				Total for six years, 1866-72.
						November, 1871.	February, 1872.	June, 1872.	Total for 1871-72.	
Cambridge Washington Academy.....	10	17	22	21	3	5	5	5	15	88
Canajoharie Academy.....	11	16	.....	.....	.....	.....	.....	.....	.....	27
Canandaigua Academy.....	30	34	32	28	15	.....	7	11	18	166
Canastota Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	2	.....	2	2
Candor Union School (Acad. Dept.).....	.....	.....	.....	.....	9	.....	3	8	11	20
Canisteo Academy.....	.....	.....	.....	.....	.....	.....	1	1	2	2
Canton Union School (Acad. Dept.).....	10	18	36	17	6	2	9	12	23	105
Carthage Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	3	4	7	7
Cary Collegiate Seminary.....	18	23	17	9	2	3	4	3	10	74
Catskill Free Academy.....	23	3	18	5	7	3	3	5	11	62
Cayuga Lake Academy.....	.....	.....	7	13	.....	.....	2	.....	2	22
Central N. Y. Conference Seminary (formerly Oneida Conference Seminary).....	38	57	55	19	17	3	7	11	21	207
Chamberlain Institute.....	19	42	26	11	5	6	4	7	17	120
Champlain Union School.....	14	30	22	4	1	.....	.....	.....	.....	71
Chester Union School (Acad. Dept.).....	10	24	5	10	2	1	.....	.....	1	52
Chili Seminary.....	.....	.....	.....	.....	.....	.....	2	4	6	6
Christian Brothers' Academy.....	.....	.....	.....	.....	.....	.....	.....	4	4	4
Cincinnati Academy.....	9	17	4	3	2	.....	.....	2	2	37
Clarence Classical Union School.....	13	14	17	1	1	2	.....	8	13	59
Claverack Academy and H. R. Institute.....	111	85	113	36	41	14	20	20	54	440
Clinton Grammar School (Fem. Dept.).....	15	21	26	10	9	2	1	.....	3	84
Clinton Liberal Institute (Male Dept.).....	28	9	31	81	1	1	1	.....	2	102
Clinton Liberal Institute (Fem. Dept.).....	.....	.....	12	1	1	.....	2	7	9	23
Cooperstown Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Corning Free Academy.....	28	26	56	23	21	5	3	5	13	167
Cortland Academy.....	60	31	18	9	16	4	3	5	12	155
Cortlandville Academy.....	18	24	16	.....	.....	.....	.....	.....	.....	58
Coxsackie Academy.....	10	.....	1	.....	.....	.....	2	1	3	14
Danville Seminary.....	34	19	27	15	7	4	4	2	10	112

Delaware Academy	14	10	11	3	5	9	1	1	4	47
Delaware Literary Institute	47	37	38	66	58	5	9	9	41	287
Deposit Academy	24	26	30	5	2	.....	.....	.....	.....	63
.....	24	8	5	3	5	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
.....	24	.....	.....	.....	.....	.....	.....	.....	.....	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	73
.....	26	80	15	.....	.....	.....	.....	.....	.....	47
.....	20	6	16	7	.....	.....	.....	.....	.....	5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	86
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
Dept.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	56
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	190
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	154
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	222
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	165
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	118
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	583
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Col. Institute,	.....	.....	.....	.....	.....	.....	.....	.....	.....	81
Franklin Academy, Malone	8	27	26	10	8	.....	.....	.....	.....	81
Franklin Academy, Prattsburgh	83	13	13	7	11	.....	.....	.....	.....	81
Fredonia Academy	19	.....	.....	.....	.....	.....	.....	.....	.....	19
Friends' Academy	8	.....	.....	.....	.....	.....	.....	.....	.....	27
.....	8	.....	.....	.....	.....	.....	.....	.....	.....	43
.....	16	26	11	8	.....	.....	.....	.....	.....	70
.....	56	84	46	15	10	.....	.....	.....	.....	227
.....	6	.....	.....	.....	.....	.....	.....	.....	.....	17
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	128
Geneva Academy	41	33	17	16	18	.....	.....	.....	.....	157
Geneva Classical and Union School	35	39	15	28	10	.....	.....	.....	.....	46
Gilbertsville Academy	17	6	8	1	2	.....	.....	.....	.....	84
Glen's Falls Academy	5	80	36	7	4	.....	.....	.....	.....	63
Gloversville	25	.....	.....	.....	.....	.....	.....	.....	.....	93
Gouverneur	118	25	84	23	20	.....	.....	.....	.....	16
Grammar St.	19	20	81	4	3	.....	.....	.....	.....	8
Greenville Academy	2	.....	4	6	.....	.....	.....	.....	.....	3
Greenwich Union School (Academic Dept.) (see	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Union Village Academy)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



## SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.				Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars claimed.	Number of scholars allowed by the Regents.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1872.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).				Males.	Females.				
Perry Academy.....	18	52	36	150	23	11	12	11	17.6	22	1	\$152 04
Phelps Union and Classical School.....	16	81	118	242	21	17	4	17	16.3	21	...	145 14
Phipps Union Seminary.....	5	75	18	110	76	76	...	76	14.5	9	67	62 20
.....	17	27	0	117	34	22	12	22	18.5	21	13	145 14
.....	23	15	4	64	90	10	20	10	15.5	26	4	179 69
.....	2	7	16	44	9	...	3	...	17.0	3	...	20 73
Port Byron Free School and Academy.....	7	17	156	241	12	7	5	7	17.0	11	1	76 02
Port Jervis Union School (Acad. Dept.).....	9	0	...	19	12	11	1	11	16.2	12	...	82 94
Pulaski Academy.....	34	21	45	183	72	35	37	35	17.6	72	...	497 60
Red Creek Union Academy.....	6	20	34	122	12	4	8	4	16.0	11	1	76 02
Rochester Female Academy.....	5	36	17	75	7	7	...	7	17.3	7	...	48 38
Rochester Free Academy.....	24	181	...	188	26	14	12	14	16.9	26	...	179 69
Rogersville Union Seminary.....	26	14	12	121	39	22	17	22	18.1	39	...	269 53
Rome Academy.....	39	...	60	121	44	23	21	23	16.7	44	...	304 06
Rural Seminary.....	20	23	33	133	31	17	14	17	19.2	31	...	214 24
Rushville Union School (Acad. Dept.).....	6	18	147	207	6	4	2	4	16.2	6	...	41 47
Sandy Hill Union School (Acad. Dept.).....	14	12	42	80	22	18	4	18	16.7	22	...	152 04
Saratoga Springs Union School (Acad. Dept.).....	5	105	...	157	9	5	4	5	16.3	9	...	62 20
Schenectady Union School (Acad. Dept.).....	10	63	...	115	23	10	7	10	16.6	23	...	158 95
Schoharie Academy.....	23	9	18	68	31	22	9	22	17.7	31	...	214 24

Beneca Falls Academy.....	16	58	55	177	20	4	10	17.1	20	...	188 23
Sherburne Union School (Acad. Dept.).....	18	11	68	65	31	14	17	17.5	31	...	214 24
Skaneateles Union School (Acad. Dept.).....	7	31	113	204	12	...	12	17.4	12	...	82 94
Sodus Academy.....	44	27	37	203	84	52	32	18.1	73	11	504 51
Spencertown Academy.....	7	...	...	30	7	8	4	17.0	6	1	41 47
Spencertown Academy (Fem. Dept.).....	1	7	45	98	1	...	1	18.0	1	...	6 91
St. Lawrence Academy.....	16	90	...	180	32	18	14	19.1	28	4	193 51
St. Lawrence Academy (Fem. Dept.).....	183	48	...	224	151	46	103	16.9	150	1	1,088 08
St. Lawrence Academy (Fem. Dept.).....	55	62	43	204	95	46	40	19.9	95	...	656 53
St. Lawrence Academy (Fem. Dept.).....	7	31	54	124	10	10	...	16.2	9	1	62 20
St. Lawrence Academy (Fem. Dept.).....	44	99	52	226	57	...	57	17.2	57	...	393 94
St. Lawrence Academy (Fem. Dept.).....	83	19	...	106	89	24	05	16.8	89	...	615 09
St. Lawrence Academy (Fem. Dept.).....	6	12	26	91	7	2	5	18.2	7	...	48 36
St. Lawrence Academy (Fem. Dept.).....	5	...	49	80	7	1	6	15.0	7	...	48 38
St. Lawrence Academy (Fem. Dept.).....	6	27	25	135	16	7	9	18.1	14	2	96 75
St. Lawrence Academy (Fem. Dept.).....	82	22	...	124	95	88	63	17.1	94	1	649 64
St. Lawrence Academy (Fem. Dept.).....	3	8	13	...	3	2	1	16.6	3	...	20 73
Wallkill Academy.....	16	...	195	287	16	6	10	17.4	16	...	110 58
Walton Union School (Acad. Dept.).....	13	68	121	206	28	10	13	18.4	28	...	158 95
Warrensburg Academy.....	14	2	41	106	16	5	11	17.3	14	2	96 75
Warsaw I.....	6	...	93	206	7	1	6	17.8	7	...	48 38
Warwick.....	8	24	...	44	9	2	7	16.0	9	...	62 20
Watkins Academy.....	63	23	65	209	82	34	48	17.3	82	...	568 71
Watkins Academy Union School.....	18	31	41	115	26	8	18	16.0	26	...	179 60
Watkins Academy Union School (Acad. Dept.).....	10	52	23	120	12	9	3	17.3	12	...	82 93
Watkins Academy Union School (Acad. Dept.).....	39	83	...	198	58	29	27	16.6	55	1	390 12
Watkins Academy Union School (Acad. Dept.).....	9	...	61	131	21	12	9	16.7	21	...	145 13
Watkins Academy Union School (Acad. Dept.).....	20	...	50	...	20	5	15	16.3	20	...	138 22
Webster Academy.....	11	19	14	69	14	6	8	16.9	14	...	96 75
Westfield Union School (Acad. Dept.).....	27	54	43	600	30	17	13	17.5	30	...	207 33
West Hebron Union School (Acad. Dept.).....	4	29	54	182	5	1	4	15.0	5	...	84 56
Westport Union School (Acad. Dept.).....	2	54	15	92	26	13	16	16.0	2	26	13 82
West Winfield Academy.....	25	23	35	188	71	25	40	17.8	71	...	490 69
Whitestown Seminary.....	57	164	...	465	94	55	89	18.3	96	8	594 35
Whitney's Point Union School (Acad. Dept.).....	28	...	...	112	50	23	27	17.2	50	...	345 56
Wilson Union School (Acad. Dept.).....	14	7	67	134	36	11	25	17.6	36	...	246 80

SCHEDULE No. 3—(Continued).

NAMES OF ACADEMIES.	AVERAGE ATTENDANCE BY TERMS.				Whole number of scholars during the year.	Number claimed to have pursued classical or higher English studies, or both, for four months, or more, of said year.	SEX OF SCHOLARS SO CLAIMED.		Average age of scholars so claimed.	Number of scholars allowed by the Regents as claimed.	Number of scholars rejected by the Regents.	Apportioned from the income of the literature fund in January, 1873.
	Academic scholars (those only who have passed the P. A. examination).	Scholars who have not passed the P. A. examination, but who have pursued higher studies.	Preparatory scholars (those pursuing elementary studies only).				Males.	Females.				
Windsor Union School (Acad. Dept.) .....	7	16	76	149	7	4	1	4	17.3	7	...	\$48 38
Woodhull Academy .....	23	21	45	274	27	8	1	8	18.9	25	2	172 78
Yates Academy .....	5	9	42	99	15	10	5	10	18.2	15	...	103 67
Yates Union School (Acad. Dept.) .....	11	....	....	58	13	8	5	8	16.0	13	...	89 84
	4,647	6,256	10,236	81,421	6,123	2,729	3,394	17.3	5,783	340		\$40,000 00

Rate of apportionment in January, 1873..... \$6.91.

**SCHEDULE No. 4.**

*Showing the number of scholars who passed the preliminary academic examination in each academy during the years 1866-7, 1867-8, 1868-9, 1869-70, and 1870-71, 1871-72, and the total for these six years.*

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.			Total for six years, 1866-72.
						November, 1871.	February, 1872.	June 1872.	
Academy at Little Falls.....	4	22	30	14	18	.....	1	.....	80
Academy of Dutchess County.....	30	.....	.....	.....	.....	.....	.....	.....	30
Addison Union School (Acad. Dept.).....	.....	4	12	.....	.....	.....	.....	.....	17
Adelphi Academy.....	.....	.....	.....	4	.....	.....	4	8	23
Afton Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	4	12	20
Albany Academy.....	25	21	7	.....	.....	.....	.....	8	61
.....	53	76	19	25	20	.....	10	2	210
..... (Acad. Dept.).....	12	50	31	21	16	.....	6	13	161
.....	.....	.....	.....	.....	3	.....	.....	2	5
.....	15	4	7	.....	3	.....	.....	.....	28
.....	.....	2	20	7	7	.....	.....	1	39
.....	17	18	16	3	.....	.....	.....	.....	54
.....	29	22	5	.....	.....	.....	.....	.....	56
Angerica Academy.....	.....	.....	.....	.....	1	.....	.....	3	7
Angola Union School.....	3	16	7	.....	11	.....	2	.....	45
Arcade Union School (Acad. Dept.).....	.....	.....	33	18	5	.....	7	.....	104
Argyle Academy.....	49	.....	9	2	.....	.....	1	.....	54
Attica Union School (Acad. Dept.).....	28	14	4	15	25	.....	10	27	230
Auburn Academic High School.....	118	36	3	15	8	.....	.....	.....	30
Augusta Academy.....	.....	8	39	27	24	.....	8	7	262
.....	77	57	9	17	16	.....	12	5	103
.....	22	14	9	6	11	.....	5	11	84
.....	24	15	9	8	7	.....	9	3	106
..... (h School).....	24	33	30	12	2	.....	1	2	140
Black River Conference Seminary.....	66	26	7	.....	.....	.....	4	.....	17
Brookfield Academy.....	6	.....	.....	.....	.....	.....	.....	.....	62
Brooklyn College and Polytechnic Institute.....	28	39	.....	.....	.....	.....	.....	.....	195
Buffalo Central School.....	.....	.....	.....	35	58	.....	30	49	.....

SCHEDULE No. 4—(Continued).

NAMES OF ACADEMIES	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.				Total for six years, 1866-72.
						November, 1871.	February, 1872.	June 1872.	Total for 1871-72.	
Cambridge Washington Academy.....	10	17	23	21	3	5	5	5	15	88
Canastota Academy.....	11	16	.....	.....	.....	.....	.....	.....	.....	27
.....	30	84	32	28	15	.....	7	11	18	166
Canastota Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	2	.....	2	2
Candor Union School (Acad. Dept.).....	.....	.....	.....	.....	9	.....	3	8	11	20
Canisteo Academy.....	.....	.....	.....	.....	.....	.....	1	1	2	2
Dept.).....	10	13	36	17	6	2	9	13	28	105
1 Dept.).....	.....	.....	.....	.....	.....	.....	3	4	7	7
.....	13	23	17	9	2	3	4	3	10	74
.....	23	3	13	5	7	3	3	5	11	63
.....	.....	.....	7	18	.....	.....	2	.....	2	22
Cayuga Lake Academy.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Central N. Y. Conference Seminary (formerly Oneida Conference Seminary).....	38	57	55	19	17	3	7	11	21	207
Chamberlain Institute.....	19	42	26	11	5	6	4	7	17	120
Champlain Union School.....	14	30	22	4	1	.....	.....	.....	.....	71
Chester Union School (Acad. Dept.).....	10	24	5	10	2	1	.....	.....	.....	52
Chili Seminary.....	.....	.....	.....	.....	.....	.....	2	4	6	6
Christian Brothers' Academy.....	.....	.....	.....	.....	.....	.....	.....	4	4	4
Cincinnati Academy.....	9	17	4	3	.....	.....	.....	2	2	37
Clarence Classical Union School.....	13	14	17	1	1	.....	.....	3	13	59
Claverack Academy and H. R. Institute.....	111	85	113	36	41	14	20	20	54	440
Clinton Grammar School (Fem. Dept.).....	15	21	26	10	9	2	1	.....	3	84
Clinton Liberal Institute (Male Dept.).....	28	9	31	31	1	1	1	.....	2	102
Clinton Liberal Institute (Fem. Dept.).....	.....	.....	12	1	1	.....	2	7	9	23
Cooperstown Union School (Acad. Dept.).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Corning Free Academy.....	26	26	56	28	21	5	3	5	13	167
Cortland Academy.....	69	81	18	9	16	4	3	5	13	155
Cortlandville Academy.....	18	24	16	.....	.....	.....	.....	.....	.....	58
Coxsack Academy.....	10	.....	1	.....	.....	.....	.....	1	3	14
Danville Seminary.....	34	19	27	15	7	4	4	2	10	113

Delaware Academy .....	14	10	11	3	5	2	1	1	4	47
Delaware Literary Institute .....	47	37	33	66	58	5	27	9	41	387
Deposit Academy .....	24	26	30	5	2	...	...	...	...	63
De Ruyter Institute .....	24	8	5	3	5	...	...	...	...	45
Dundee Academy .....	24	...	...	...	...	2	2	3	7	94
Dunkirk Union School (Acad. Dept.) .....	26	...	...	...	...	...	...	...	...	78
East Bloomfield Academy .....	20	6	16	8	2	...	...	...	...	47
East Genesee Conference Seminary .....	...	...	...	...	...	...	...	...	...	5
Dept.) .....	...	...	...	...	...	...	...	...	...	36
Dept.) .....	...	...	...	...	...	...	...	...	...	53
Dept.) .....	15	26	15	5	1	2	3	2	5	56
Dept.) .....	60	11	43	26	...	...	...	...	...	190
Dept.) .....	11	5	8	4	3	...	...	...	...	81
Dept.) .....	40	34	33	26	9	4	4	5	13	154
Dept.) .....	33	38	59	20	13	3	5	3	11	202
Dept.) .....	9	...	1	...	...	...	...	...	...	10
Dept.) .....	35	16	36	16	9	15	20	14	49	165
Dept.) .....	46	39	3	...	12	18	...	...	18	118
Dept.) .....	177	133	121	51	34	6	6	6	18	583
Dept.) .....	...	...	2	8	1	...	...	...	...	11
Dept.) .....	...	...	23	10	8	...	...	...	11	81
Dept.) .....	...	...	23	7	11	...	...	...	...	81
Dept.) .....	...	...	...	...	...	...	...	...	...	19
Dept.) .....	...	...	...	...	...	...	...	...	...	27
Dept.) .....	...	...	...	...	...	...	...	...	...	43
Dept.) .....	...	...	...	...	...	...	...	...	...	70
Dept.) .....	...	...	...	...	...	...	...	...	...	237
Dept.) .....	...	...	...	...	...	...	...	...	...	17
Dept.) .....	...	...	...	...	...	...	...	...	...	136
Dept.) .....	...	...	...	...	...	...	...	...	...	157
Dept.) .....	...	...	...	...	...	...	...	...	...	46
Dept.) .....	...	...	...	...	...	...	...	...	...	84
Dept.) .....	...	...	...	...	...	...	...	...	...	63
Dept.) .....	...	...	...	...	...	...	...	...	...	233
Dept.) .....	...	...	...	...	...	...	...	...	...	92
Dept.) .....	...	...	...	...	...	...	...	...	...	16
Dept.) .....	...	...	...	...	...	...	...	...	...	3
Franklin Academy, Malone .....	3	27	23	10	8	...	...	...	...	...
Franklin Academy, Prattsburgh .....	33	13	18	7	11	...	...	...	...	...
Fredonia Academy .....	19	...	...	...	...	...	...	...	...	...
Friends' Academy .....	3	...	19	5	...	...	...	...	...	...
Friendship Academy .....	3	19	8	8	2	1	2	...	...	...
Genesee Valley Seminary .....	16	26	11	7	3	...	...	...	...	...
Genesee Wesleyan Seminary .....	56	84	46	15	10	...	...	...	...	...
Genesee and Wyoming Seminary .....	6	...	...	...	...	...	...	...	...	...
Genesee Academy .....	41	33	17	16	18	...	...	...	...	...
Geneva Classical and Union School .....	35	39	15	26	10	3	15	14	33	...
Gilbertsville Academy .....	17	6	8	1	2	...	...	...	...	...
Glen's Falls Academy .....	5	30	36	7	4	...	...	...	...	...
Gloversville .....	26	...	...	...	...	...	...	...	...	...
Gouverneur .....	116	25	34	23	11	4	10	13	27	...
Grammar School of Madison University .....	19	20	81	4	20	5	4	4	18	...
Greenville Academy .....	2	...	4	6	10	...	...	...	...	...
Greenwich Union School (Academic Dept.) (see Union Village Academy) .....	...	...	...	...	...	...	...	...	...	...

SCHEDULE No. 4—(Continued).

NAMES OF ACADEMIES.	1900-7.	1907-8.	1908-9.	1909-70.	1870-71.	1871-72.				Total for six years, 1866-72.
						November, 1871.	February, 1872.	June, 1872.	Total for 1871-72.	
Griffith Institute .....	6	48	56	86	2	2	.....	4	6	154
.....	42	58	23	12	.....	.....	.....	.....	.....	135
.....	27	22	23	15	.....	.....	.....	.....	.....	87
(Acad. Dept.) .....	.....	.....	.....	15	5	2	4	.....	6	26
.....	.....	.....	.....	.....	4	2	.....	.....	4	8
.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2
.....	.....	81	53	5	8	1	.....	6	9	101
Haverling Union School (Acad. Dept.) .....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Henrietta Union School (Academic Department)	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
(see Monroe Academy) .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Holland Patent Union School (Acad. Dept.) .....	.....	.....	.....	.....	4	.....	1	.....	.....	.....
Holley Union School (Acad. Dept.) .....	11	10	8	6	3	.....	.....	4	.....	50
Hoosick Falls Union School (Acad. Dept.) .....	.....	.....	16	7	4	.....	.....	.....	.....	88
Hudson Academy .....	16	18	30	3	4	2	.....	11	16	89
Hungerford Collegiate Institute .....	31	21	.....	.....	20	10	.....	5	24	96
Huntington Union School .....	.....	47	11	2	10	3	.....	5	7	77
Illion Union School (Acad. Dept.) .....	.....	.....	.....	.....	.....	.....	.....	7	9	9
Ithaca Academy .....	36	46	40	24	19	5	.....	14	27	193
Jamestown Union School and Collegiate Institute,	80	116	104	60	67	7	.....	26	39	475
Jane Grey School .....	2	5	2	.....	.....	.....	.....	.....	.....	7
Johnstown Union School (Acad. Dept.) .....	81	8	14	33	1	5	.....	13	16	76
Jonesville Academy .....	.....	11	.....	6	.....	.....	.....	.....	.....	48
.....	.....	22	23	4	2	13	.....	10	23	74
.....	.....	12	19	12	6	6	.....	4	11	60
.....	.....	23	.....	1	.....	.....	.....	.....	.....	24
.....	.....	.....	.....	6	20	.....	10	23	33	59
.....	7	1	1	.....	.....	.....	.....	.....	.....	9
.....	.....	.....	.....	.....	.....	1	.....	5	10	10
.....	12	.....	25	15	7	.....	.....	.....	.....	59
Lawrenceville Academy .....	60	64	85	23	8	3	.....	6	16	197
Leavenworth Inst. (Acad. Dep. of Wolcott U. Sch.)	14	16	8	6	5	.....	.....	1	3	53

Library	4	6	6	6	12	7	5	6	7	6	7	18	53
Le Roy Academic Institute	5	...	...	5	...	1	...	...	...	...	...	3	14
Liberty Normal Institute	61	88	50	50	...	50	21	20	...	...	...	54	539
...	10	3	68	68	84	25	1	...	...	...	...	1	186
...	12	...	84	84	11	...	11	...	...	...	...	28	79
...	57	28	12	12	10	...	...	...	...	...	...	...	111
cad. Dept.)	...	11	3	3	...	5	1	...	...	...	...	1	20
...	8	8	...	...	...	...	...	...	...	...	...	...	6
...	17	16	29	29	...	...	...	...	...	...	...	...	55
...	18	28	6	6	1	5	...	1	...	...	...	2	60
...	15	...	...	...	3	8	...	2	...	...	...	2	28
...	...	...	...	...	...	...	6	5	1	...	...	13	12
Dept.)	...	...	...	...	...	1	...	...	...	...	...	...	1
Dept.)	...	2	11	11	7	6	4	1	...	...	...	...	31
...	21	8	10	10	5	3	8	2	...	...	...	...	53
...	33	4	18	18	11	7	1	...	...	...	...	...	76
...	40	59	31	31	48	...	4	...	...	...	...	...	185
...	19	7	17	17	29	10	...	...	...	...	...	...	83
ta Union School)	4	18	4	4	...	...	...	...	...	...	...	...	26
...	7	6	7	7	5	8	...	1	...	...	...	...	29
...	24	6	8	8	...	10	4	6	...	...	...	17	65
Mount Morris Union School (Acad. Dept.)	20	9	1	1	9	3	...	4	...	...	...	7	49
Munro Collegiate Institute	30	15	21	21	33	13	...	8	...	...	...	23	142
...	1	11	7	7	14	1	...	5	...	...	...	5	89
...	...	20	2	2	...	1	...	1	...	...	...	3	26
...	64	52	55	55	80	8	...	1	...	...	...	6	215
...	42	39	29	29	24	29	...	8	...	...	...	17	180
...	21	...	13	13	12	7	...	...	...	...	...	...	53
see McGrawville	...	...	...	...	...	...	...	...	...	...	...	...	...
...	19	...	...	...	...	...	...	...	...	...	...	...	19
...	23	34	23	23	24	24	...	10	...	...	...	18	141
...	...	...	19	19	9	6	...	8	...	...	...	3	57
...	54	78	33	33	33	16	...	...	...	...	...	4	216
...	...	91	23	23	4	4	...	3	...	...	...	4	136
...	15	17	27	27	...	10	...	...	...	...	...	11	80
...	...	6	...	...	...	1	...	...	...	...	...	3	10
...	20	16	10	10	7	3	...	1	...	...	...	1	57
...	25	44	1	1	6	7	...	8	...	...	...	11	94
...	10	43	12	12	4	8	...	...	...	...	...	5	83



SCHEDULE No 4 — (Continued).

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72				Total for six years, 1866-72.
						November, 1871.	February, 1872.	June, 1872.	Total for 1871-72.	
Oswego High School .....	29	12	20	15	17	4	4	9	17	110
Owego Free Academy .....	...	63	...	19	11	9	10	3	22	114
Oxford Academy .....	36	34	62	28	11	5	2	3	10	181
Packer Institute .....	83	100	36	90	86	8	29	46	85	398
Palante school .....	...	...	...	2	1	...	1	3	4	7
Palathi School .....	...	...	...	4	...	...	1	4	5	9
Palmyra Union School .....	44	18	42	16	5	...	...	8	8	128
Parma Institute .....	...	44	22	4	...	...	...	...	...	70
Penfield Seminary .....	2	...	...	...	...	...	...	...	...	2
Penn Yan Academy .....	77	25	15	...	10	4	5	8	16	147
Perry Academy .....	88	11	27	4	4	...	2	2	4	88
Phelps Union and Classical School .....	18	31	23	8	4	...	2	1	3	87
Phelps Union School .....	11	17	...	26	1	...	3	1	4	59
Prospect Academy .....	20	20	17	11	16	...	...	1	1	85
Prospect Academy .....	...	2	...	20	25	...	1	4	5	62
Prospect Academy .....	18	34	18	7	...	...	...	...	...	72
Prospect Academy .....	4	14	1	2	2	1	2	1	4	27
Prospect Academy .....	...	14	2	18	5	1	...	5	6	40
Prospect Academy .....	83	19	...	...	...	...	...	...	...	53
Pulaski Academy .....	45	35	9	84	1	1	6	6	15	189
Red Creek Union Academy .....	10	8	10	4	7	8	1	3	7	53
Richburgh Union School (Acad. Dept.) .....	...	...	...	7	...	...	...	...	...	7
Rochester Female Academy .....	...	7	15	5	3	...	2	1	3	23
Rochester Free Academy .....	...	...	9	8	11	...	...	27	27	55
Rockland Female Institute .....	...	...	5	...	4	...	...	...	...	9
Rogersville Union Seminary .....	53	57	...	41	18	13	...	...	13	183
Rome Academy .....	46	41	53	11	9	5	5	15	25	187
Rural Seminary .....	30	13	8	1	26	5	7	...	12	90
Rushford Union School (Acad. Dept.) .....	...	5	4	...	...	...	...	...	...	10
Rushville Union School (Acad. Dept.) .....	...	...	...	3	8	...	...	...	...	11

[illegible]

## SCHEDULE No. 4—(Continued).

NAMES OF ACADEMIES.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.				Total for six years, 1866-72.
						November, 1871.	February, 1872.	June, 1872.	Total for 1871-72.	
Watertown High School.....	16	28	12	27	16	3	17	4	24	118
Watkins Academic Union School.....	12	10	.....	11	8	.....	8	7	15	56
Waverly Union School (Acad. Dept.).....	14	81	62	24	14	.....	.....	1	1	196
Webster Academy.....	21	.....	.....	2	4	.....	13	.....	13	40
Westfield Union School (Acad. Dept.).....	48	8	.....	12	9	4	3	10	17	94
West Hebron Union School (Acad. Dept.).....	.....	.....	.....	14	11	5	.....	.....	5	30
Westport Union School (Acad. Dept.).....	.....	.....	.....	2	.....	.....	.....	.....	.....	14
West Winfield Academy.....	38	12	.....	31	28	16	10	7	33	174
Whitestown Seminary.....	63	29	64	34	41	7	6	4	17	294
Whitney's Point Union School (Acad. Dept.).....	4	81	5	7	19	11	5	9	25	91
Williamsville Academy.....	.....	9	21	.....	.....	.....	.....	.....	.....	30
Wilson Union School (Acad. Dept.).....	4	22	11	.....	1	1	8	15	24	62
Windsor Union School (Acad. Dept.).....	21	16	11	.....	3	.....	.....	1	1	53
Wolcott Union School (see Leavenworth Institute).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Woodhull Academy.....	.....	32	59	20	9	5	1	.....	6	126
Yates Academy.....	23	11	8	3	4	8	17	.....	20	69
Yates Union School (Acad. Dept.).....	11	.....	41	10	6	.....	.....	1	1	69
Total .....	4,830	4,835	4,260	2,658	1,902	559	842	1,054	2,455	20,940



## SCHEDULE No. 5,

Containing abstracts from the academies reports for 1872, for the year ending between the 15th of June and the 15th of September of said year, exhibiting a statement of the permanent endowments and other property belonging to the several academies from which reports with the amount of debts due by them respectively:

NAMES OF ACADEMIES	PERMANENT ENDOWMENTS.			Total value of lot, buildings, library and apparatus.	also holds.	Debts due by academy.
	Value of academy lot and buildings.	Value of academy lot and buildings.	Value of apparatus.			
Academy at Little Falls .....	\$23,500	\$774	\$373	\$24,647	720	\$333
Addison Union School (Academic Department) .....	11,200	150	265	11,615	615	.....
Adelphi Academy .....	140,000	700	704	141,404	904	74,507
Afton Union School (Acad. Dept.), ..	5,530	177	163	5,870	925	495
Albany Academy .....	90,000	1,872	2,234	94,106	956	3,000
Albion Academy .....	14,000	840	484	15,324	324	2,000
Alfred University (Acad. Dept.).	70,000	6,394	3,606	80,000	600	16,600
Almond Academy .....	12,500	175	166	12,841	464	.....
..... (Academic .....	38,400	500	400	39,300	300	5,000
.....	10,000	425	182	10,607	607	.....
.....	3,500	1,590	250	5,340	384	143
Atenea Union School (Ac. Dept.), ..	23,000	511	488	23,999	581	.....
Anburn Academic High School ..	21,586	350	690	22,626	408	.....
Angusta Academy .....	2,487	390	275	3,152	152	.....
Anroza Academy .....	15,913	655	480	17,048	048	.....
Baldwinsville Free Academy .....	19,102	400	871	20,373	823	809
Batavia Union School (Ac. Dept.), ..	12,000	3,086	743	15,829	407	.....

## ACADEMIES.

PERMANENT ENDOWMENTS, ETC.

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Binghamton Academy (Central High School) .....	81,167	3,000	450	84,617	.....	84,617	.....
Black River Conference Seminary, Brookfield Academy.....	33,533	469	865	34,867	3,398	38,265	6,800
Brooklyn Coll. & Poly. Institute, Buffalo Central School.....	3,000	215	237	3,452	.....	3,452	.....
Buffalo Female Academy.....	130,000	2,270	4,561	136,831	13,679	150,510	.....
Cambridge Washington Academy, Canadaigua Academy.....	45,000	1,137	1,797	47,934	.....	47,934	.....
Canastota Union School (Acad. Department).....	51,500	1,423	2,739	55,662	3,500	59,162	4,500
Candor Union School (Academic Department).....	7,350	2,006	686	10,042	3,787	13,829	3,087
Canisteo Academy.....	15,000	929	1,976	17,905	13,940	31,845	.....
Canton Union School (Academic Department).....	4,000	356	354	4,710	.....	4,710	.....
Carthage Union School (Acad. Department).....	8,870	280	201	9,351	470	9,821	379
Cary Collegiate Seminary.....	16,000	155	660	16,815	.....	16,815	.....
Catskill Free Academy.....	5,500	512	371	6,383	.....	6,383	460
Cayuga Lake Academy.....	12,000	260	150	12,410	8	12,418	.....
Central N. Y. Conf. Seminary ..	19,000	912	250	20,162	23,026	43,188	.....
Chamberlain Institute .....	27,000	170	717	27,887	600	28,487	.....
Cincinnati Academy.....	13,000	3,791	550	17,341	6,800	24,141	.....
Clarence Classical Union School, Claverack Academy & H. R. Inst., Clinton Grammar School.....	81,500	3,000	3,378	87,878	6,829	94,707	30,893
Clinton Liberal Institute .....	64,500	200	1,200	65,900	44,046	109,946	4,515
Corning Free Academy .....	3,983	512	478	4,973	.....	4,973	.....
	5,000	660	446	6,106	15,828	21,934	.....
	42,627	1,875	877	45,379	15,214	60,593	3,200
	25,000	800	260	26,060	.....	26,060	17,000
	36,500	2,110	1,116	39,726	12,646	52,372	.....
	38,179	150	409	38,738	635	39,373	25,583

## ACADEMIES.

## SCHEDULE No. 5—(Continued).

NAMES OF ACADEMIES.	PERMANENT ENDOWMENTS.			Total value of lot, buildings, library and apparatus.	Other academic property.	Total value of the whole.	Debts due by academy.
	Value of academy lot and buildings.	Value of library.	Value of apparatus.				
Cortland Academy .....	\$41,656	\$1,400	\$1,203	\$44,259	\$2,271	\$46,530	\$3,765
Coxsackie Academy .....	3,600	150	155	3,905	237	4,142	.....
Dansville Seminary .....	16,000	700	225	16,925	300	17,225	1,450
Delaware Academy .....	27,000	1,541	500	29,041	5,354	34,395	3,900
Delaware Literary Institute .....	31,500	2,123	2,005	35,628	1,051	36,679	164
Deposit Academy .....	7,738	293	721	8,752	450	9,202	.....
East Bloomfield Academy .....	5,700	827	598	7,125	616	7,741	1,080
East Hamburg Friends' Inst. ....	11,008	164	157	11,329	919	12,248	3,898
Egberts High School .....	15,000	2,000	240	17,240	.....	17,240	.....
Elizabethtown Un. School (Acad. Department) .....	4,525	246	253	5,024	440	5,464	179
Ellington Union School (Acad. Department) .....	4,900	334	160	5,394	162	5,556	68
Elmira Free Academy .....	29,317	1,443	1,421	32,181	1,322	33,503	.....
Erasmus Hall Academy .....	25,000	2,953	423	28,376	9,061	37,437	.....
Evans Academy .....	9,000	427	194	9,621	15,082	24,703	.....
Fairfield Academy .....	20,000	1,559	1,520	23,079	5,893	28,972	9,137
Falley Seminary .....	17,700	1,100	1,594	20,394	2,100	22,494	.....
Forestville Free Academy .....	11,946	665	151	12,762	970	13,732	95
Fort Covington Academy .....	2,450	200	300	2,950	714	3,664	.....
Fort Edward Collegiate Institute, .....	77,000	1,179	1,481	79,660	110	79,770	.....
Fort Plain Sum. & Fein. Col. In., .....	28,100	175	613	28,888	.....	28,888	2,100

Franklin Academy, Malone.....	47,000	1,400	500	48,900	3,000	51,900	.....
Franklin Academy, Prattsburgh,	11,000	800	200	12,000	758	12,758	.....
Friends' Academy.....	25,000	575	950	26,525	5,187	31,712	1,637
Friendship Academy .....	9,761	227	564	10,552	.....	10,552	.....
Genesee Valley Seminary .....	5,935	377	200	6,512	407	6,919	.....
Genesee Wesleyan Seminary.....	35,000	2,060	3,838	40,898	9,800	50,698	.....
Genesee and Wyoming Seminary,	7,410	955	600	8,965	2,831	11,796	.....
Geneseo Academy.....	30,000	500	410	30,910	10,700	41,610	8,800
Geneva Classical and Union Sch'l,	37,500	945	341	38,786	8,900	47,686	.....
Gilbertsville Academy .....	5,650	635	250	6,535	2,413	8,948	44
Glen's Falls Academy .....	10,000	300	312	10,612	50	10,662	3,297
Gloversville Union School (Acad.							
Department).....	22,000	154	200	22,354	2,676	25,030	4,280
Gouverneur Wesleyan Seminary,	10,371	740	1,650	12,761	20,200	32,961	2,026
Grammar School of Madison Uni.,	.....	678	250	928	.....	928	.....
Greenville Academy.....	2,950	350	288	3,588	134	3,722	.....
Greenwich Union School (Acad.							
Department).....	8,000	150	300	8,450	490	8,940	200
Griffith Institute .....	9,400	272	790	10,462	8,462	18,924	.....
Groton Academy .....	7,400	890	600	8,890	.....	8,890	.....
Halfmoon Academy .....	2,555	210	405	3,170	75	3,245	.....
Hamburgh Union School (Acad.							
Department).....	14,750	493	550	15,793	389	16,182	.....
Hartwick Seminary.....	30,052	2,169	622	32,843	14,227	47,070	.....
Haverling Union School (Acad.							
Department).....	34,000	360	838	35,198	.....	35,198	.....
Holland Patent Union School							
(Acad. Department) .....	8,000	500	176	8,676	.....	8,676	.....



## SCHEDULE No. 5—(Continued).

NAMES OF ACADEMIES.	PERMANENT ENDOWMENTS.			Total value of lot, buildings, library and apparatus.	Other academic property.	Total value of the whole.	Debits due by academy.
	Value of academy lot and buildings.	Value of library.	Value of apparatus.				
Holley Union School (Acad. Department).....	\$5,130	\$458	\$200	\$5,788	\$1,000	\$6,788	.....
Hoosick Falls Un. School (Acad. Department).....	11,000	726	250	11,976	55	12,031	.....
Hudson Academy.....	12,000	268	237	12,505	1,469	13,974	\$200
Hungerford Collegiate Institute, .....	46,500	1,275	908	48,683	11,900	60,583	11,796
Huntington Union School.....	18,258	575	402	19,235	285	19,520	2,000
Ithaca Academy.....	18,400	570	1,710	20,680	9,481	30,161	192
Jamestown Union School and Collegiate Institute.....	90,000	1,304	1,413	92,717	.....	92,717	.....
Johnstown Union School (Acad. Department).....	5,000	668	1,378	7,046	.....	7,046	1,182
.....	5,600	671	405	6,676	.....	6,676	.....
.....	4,909	274	474	5,657	75	5,732	.....
.....	18,000	690	908	19,598	5,700	25,298	.....
.....	4,200	367	344	4,931	9,000	13,931	273
.....	3,964	557	217	4,738	226	4,964	.....
.....	8,786	506	321	9,563	.....	9,563	.....
Leavenworth Institute.....	30,000	382	795	31,177	1,892	33,069	.....
Le Roy Academic Institute.....	1,400	241	164	1,805	1,535	3,340	.....
Liberty Normal Institute.....	23,000	496	1,246	24,844	2,200	27,044	.....
Lockport Union School.....	23,010	2,289	800	31,000	38,972	70,071	8,927
Lowville Academy.....							

PERMANENT ENDOWMENTS, ETC.

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Lyons Union School .....	12,500	816	415	13,731	1,137	14,868	.....
Macedon Academy .....	4,440	260	718	5,418	543	5,961	80
McGrawville Un. School (Acad. Department).....	15,900	171	152	16,223	800	16,523	302
Marion Collegiate Institute.....	11,959	492	1,374	13,825	907	14,732	.....
Marshall Seminary of Easton ...	6,450	400	150	7,000	2,010	9,010	.....
Martin Institute .....	5,500	178	30	5,708	.....	5,708	1,763
Massena Union School, (Acad. Department).....	14,450	173	150	14,773	.....	14,773	.....
Mayville Union School (Acad. Department).....	17,000	829	484	18,313	275	18,588	.....
Mechanicville Academy.....	6,256	225	393	6,874	40	6,914	1,400
Medina Free Academy.....	6,900	1,576	327	8,803	.....	8,803	694
Mexico Academy.....	14,000	1,458	968	16,426	463	16,889	.....
Middlebury Academy.....	5,787	1,466	850	8,103	3,840	11,943	199
Montgomery Academy.....	6,850	260	340	7,450	501	7,951	320
Moravia Union School (Acad. Department).....	16,400	193	250	16,843	.....	16,843	.....
Mount Morris Un. School (Acad. Department).....	5,500	410	230	6,140	.....	6,140	.....
Munro Collegiate Institute.....	23,500	978	1,275	25,753	15,700	41,453	.....
Naples Academy.....	17,300	847	540	18,687	1,651	20,338	.....
Nassau Academy.....	5,468	215	243	5,926	189	6,115	1,400
Newark Un. School & Academy,	10,179	704	1,840	12,723	523	13,246	.....
New Berlin Academy.....	4,400	380	273	5,053	100	5,153	.....
New Paltz Academy .....	7,900	776	552	9,228	455	9,683	.....
New York Conference Seminary,	5,000	721	659	6,380	400	6,780	.....
Norwich Academy .....	11,500	800	798	13,098	447	13,545	2,814
Nunda Academy.....	11,000	701	525	12,226	825	13,051	1,730

## ACADEMIES.

## SCHEDULE No. 5—(Continued).

NAMES OF ACADEMIES.	PERMANENT ENDOWMENTS.			Total value of lot, buildings, library and apparatus.	Other academic property.	Total value of the whole.	Debts due by academy.
	Value of academy lot and buildings.	Value of library.	Value of apparatus.				
Ogdensburgh Educational Inst..	\$6,000	\$3,011	\$500	\$9,511	.....	\$9,511	.....
Oneida Seminary.....	21,550	359	656	22,565	\$1,067	23,632	\$5,137
Onondaga Academy.....	13,100	600	200	13,900	1,751	15,651	2,571
Ontario Female Seminary.....	23,295	1,087	1,017	25,399	60	25,459	21,245
Oswego High School.....	33,000	3,219	467	36,686	.....	36,686	.....
Owego Free Academy.....	9,000	1,185	511	10,696	200	10,896	.....
Oxford Academy.....	9,450	955	900	11,305	14,528	25,833	700
Packer Collegiate Institute.....	123,700	4,470	4,699	132,869	42,476	175,345	.....
Palatine Bridge Union School...	3,281	179	180	3,640	.....	3,640	.....
Palmyra Classical Union School,	14,000	1,359	789	16,148	2,025	18,173	.....
Peekskill Academy.....	23,077	787	537	24,401	94	24,495	4,192
Penn Yan Academy.....	15,200	900	480	16,580	.....	16,580	.....
Perry Academy.....	21,500	615	230	22,345	1,600	23,945	2,000
Phelps Union and Classical Sch'l,	6,100	522	345	6,967	1,179	8,146	.....
Phipps Union Seminary.....	12,700	1,040	366	14,106	2,000	16,106	.....
Pike Seminary.....	8,185	326	453	8,964	.....	8,964	.....
Plattsburgh High School.....	4,900	*30	250	5,180	250	5,430	.....
Pompey Academy.....	5,400	401	169	5,970	1,046	7,016	8
Port Byron Free School and Academy.....	9,303	1,048	395	10,746	78	10,819	5,000
Port Jervis Union School (Acad. Department).....	9,000	280	358	9,638	289	9,877	.....

Pulaski Academy .....	15,000	489	484	15,973	3,800	19,773	.....
Red Creek Union Academy.....	10,725	300	300	11,325	1,672	12,997	.....
Rochester Female Academy .....	7,300	210	250	7,760	249	8,009	549
Rochester Free Academy.....	34,500	City lib'y	1,117	35,617	800	36,417	.....
Rogersville Union Seminary .....	9,000	500	260	9,760	400	10,160	.....
Rome Academy.....	11,500	500	500	12,500	500	13,000	.....
Rural Seminary.....	4,448	603	150	5,201	97	5,298	32
Rushville Union School (Acad. Department).....	15,000	190	195	15,385	1,175	16,560	2,500
Sandy Hill Union School (Acad. Department).....	28,000	200	175	28,375	2,500	30,875	6,800
Saratoga Springs Union School (Acad. Department) .....	16,000	200	245	16,445	500	16,945	.....
Sanquoit Academy .....	4,100	252	578	4,930	.....	4,930	251
Schenectady Union School (Acad. Department).....	43,560	City lib'y	626	44,186	.....	44,186	.....
Seneca Falls Academy .....	5,398	851	422	6,671	3,228	9,899	.....
Sherburne Union School (Acad. Department).....	11,000	586	392	11,978	700	12,678	.....
Skaneateles Union School (Acad. Department).....	12,000	860	150	13,010	.....	13,010	.....
Sodus Academy.....	3,520	318	286	4,124	382	4,506	.....
Spencertown Academy.....	2,750	200	193	3,143	.....	3,143	.....
S. S. Seward Institute.....	12,000	340	200	12,540	20,000	32,540	.....
Stamford Seminary .....	3,000	220	150	3,370	.....	3,370	.....
Starkey Seminary .....	18,600	2,053	438	21,091	10,741	31,832	.....
Syracuse High School.....	125,000	City lib'y	1,400	126,400	.....	126,400	.....
Ten Broeck Free Academy .....	22,140	822	621	23,583	39,834	63,417	1,849

\* Library mostly destroyed by fire.

## ACADEMIES.

## SCHEDULE No. 5—(Continued).

NAMES OF ACADEMIES.	PERMANENT ENDOWMENTS.			Total value of lot, buildings, library and apparatus.	Other academic property.	Total value of the whole.	Debts due by academy.
	Value of academy lot and buildings.	Value of library.	Value of apparatus.				
Troy Academy.....	\$16,000	\$175	\$291	\$16,466	.....	\$16,466	.....
Troy Female Seminary.....	12,100	2,406	1,036	15,542	.....	15,542	.....
Troy High School.....	28,000	930	1,434	30,364	\$550	30,914	.....
Trumansburgh Academy.....	5,533	523	700	6,756	142	6,898	\$253
Unadilla Academy.....	3,500	310	185	3,995	.....	3,995	1,140
Union Academy of Belleville.....	17,850	1,147	978	19,975	214	20,189	1,500
Utica Academy.....	55,000	774	898	56,672	2,500	59,172	.....
Vernon Academy.....	3,000	400	200	3,600	.....	3,600	.....
Wallkill Academy.....	10,000	400	600	11,000	.....	11,000	.....
Walton Un. School (Acad. Dept.),	8,000	971	493	9,464	400	9,864	.....
Warrensburgh Academy.....	3,575	284	175	4,034	50	4,084	.....
Warsaw Un. School (Acad. Dept.),	6,100	1,452	685	8,237	25,036	33,273	.....
Warwick Institute.....	7,399	448	418	8,265	50	8,315	.....
Washington Academy.....	31,500	550	800	32,850	.....	32,850	.....
Waterford Union School (Acad. Department).....	11,500	250	150	11,900	.....	11,900	.....
Waterloo Union School (Acad. Department).....	17,000	883	581	18,464	30	18,494	6,000
Watertown High School.....	18,000	1,795	703	20,498	.....	20,498	.....
Watkins Academic Union School,	16,750	430	386	17,566	1,256	18,822	.....
Waverly Un. School (Acad. Dept.)	19,892	581	700	21,173	.....	21,173	5,584
Webster Academy.....	4,183	188	151	4,522	35	4,557	.....

Westfield Union School (Acad. Department).....	60,000	1,472	413	61,885	1,864	63,749	36,716
West Hebron Un. School (Acad. Department).....	3,055	270	206	3,531	45	3,576	.....
Westport Union School (Acad. Department).....	2,650	200	300	3,150	99	3,249	52
West Winfield Academy.....	12,965	702	955	14,622	.....	14,622	332
Whitestown Seminary .....	83,000	1,555	1,488	86,043	6,500	92,543	21,597
Whitney's Point Union School (Acad. Dept.).....	9,750	197	165	10,112	665	10,777	3,050
Wilson Un. School (Acad. Dept.)	4,446	850	300	5,596	311	5,907	.....
Windsor Un. School (Acad. Dept.)	4,709	336	150	5,195	.....	5,195	.....
Woodhull Academy .....	4,400	250	155	4,805	.....	4,805	.....
Yates Academy .....	3,772	520	300	4,592	.....	4,592	.....
Yates Union School (Acad. Dept.)	17,123	482	200	17,805	2,594	20,399	531
	\$3,912,081	\$162,564	\$130,490	\$4,205,135	\$686,897	\$4,892,032	\$389,838

## SCHEDULE No. 6,

*Containing a statement of the annual revenues and expenditures of the several academies and academical departments of union schools, from which reports were received for the year ending between the 15th of June and the 15th of September, 1872.*

NAMES OF ACADEMIES.	ANNUAL REVENUE.			ANNUAL EXPENDITURE.			Excess (if any) of revenue over expenditure.	Excess (if any) of expenditure over revenue.
	From tuition.	From other sources.	Total revenue.	For teachers' salaries.	For other purposes.	Total expenditure.		
Academy at Little Falls.....	\$1,256	\$993	\$2,249	\$1,396	\$853	\$2,249	.....	.....
Addison Un. School (Acad. Department) .....	105	2,135	2,240	1,710	530	2,240	.....	.....
Adelphi Academy.....	38,531	7,210	45,741	30,421	38,940	69,361	.....	\$23,620
Afton U. Sch'l (Acad. Dept.),	616	1,196	1,812	1,486	326	1,812	.....	.....
Albany Academy .....	10,910	1,628	12,538	9,348	3,190	12,538	.....	.....
Albion Academy.....	1,865	683	2,548	2,100	448	2,548	.....	.....
Alfred Univ'y (Acad. Dept.),	3,217	5,372	8,589	5,742	2,847	8,589	.....	.....
Almond Academy.....	1,156	182	1,338	1,156	159	1,315	\$23	.....
Amsterdam Academy.. ...	8,118	3,908	12,026	8,151	3,875	12,026	.....	.....
Arcade Union School (Acad. Department) .....	46	2,254	2,300	1,550	741	2,291	9	.....
Argyle Academy.....	660	194	854	799	80	879	.....	25
Attica Union School (Acad. Department) .....	300	12,900	13,200	2,378	10,822	13,200	.....	.....
Auburn Acad. High School,	822	7,080	7,902	3,742	4,160	7,902	.....	.....
Augusta Academy .....	83	121	204	182	22	204	.....	.....
Aurora Academy .....	2,185	854	3,039	2,677	362	3,039	.....	.....
Baldwinville Free Academy	800	5,118	5,918	2,640	4,140	6,780	.....	862

## ACADEMIES.

Batavia Union School (Acad. Department) .....	223	6,885	7,108	4,040	2,731	6,771	337	.....
Binghamton Academy (Central High School) .....	77	3,907	3,984	3,736	248	3,984	.....	.....
Black River Conf. Seminary, Brookfield Academy .....	1,215	7,806	9,021	2,425	1,601	4,026	4,995	.....
Brooklyn Col. and Polytechnic Institute .....	471	7	478	438	40	478	.....	.....
Buffalo Central School .....	61,351	4,013	65,364	52,677	10,405	63,082	2,282	.....
Buffalo Female Academy .....	.....	13,575	13,575	13,075	500	13,575	.....	.....
Cambridge Wash'ton Acad. .	7,557	355	7,912	6,115	1,797	7,912	.....	.....
Canandaigua Academy .....	2,085	808	2,893	1,968	769	2,737	156	.....
Canastota Un. School (Acad. Department) .....	4,640	6,636	11,276	5,905	5,299	11,204	72	.....
Candor U. Sch'l (Acad. Dept)	10	2,778	2,788	2,019	944	2,963	.....	175
Canisteo Academy .....	140	2,003	2,143	1,700	687	2,387	.....	244
Canton U. Sch'l (Acad. Dept)	2,300	864	3,164	2,300	864	3,164	.....	.....
Carthage U. Sch'l (A. Dept.)	560	3,697	4,257	2,948	1,215	4,163	94	.....
Cary Collegiate Seminary ..	131	3,891	4,022	3,514	500	4,014	8	.....
Catskill Free Academy .....	1,789	5,678	7,467	2,606	1,915	4,521	2,946	.....
Cayuga Lake Academy .....	122	2,253	2,375	2,100	275	2,375	.....	.....
Central N. Y. Conf. Sem'y.	2,249	2,168	4,417	2,441	1,976	4,417	.....	.....
Chamberlain Institute .....	8,158	15,609	23,767	6,500	17,130	23,630	137	.....
Cincinnati Academy .....	4,500	10,270	14,770	6,990	7,780	14,770	.....	.....
Clarence Classical Un. Sch'l,	500	336	836	841	47	888	.....	52
Claverack Acad. & H.R. Inst.	315	2,255	2,570	1,700	870	2,570	.....	.....
Clinton Grammar School .....	16,743	2,215	18,958	16,812	2,104	18,916	42	.....
Clinton Liberal Institute .....	4,855	211	5,066	3,275	1,791	5,066	.....	.....
Corning Free Academy .....	4,962	13,716	18,678	5,002	14,320	19,322	.....	644
	55	3,465	3,520	2,900	620	3,520	.....	.....



## ACADEMIES.

## SCHEDULE No. 6—(Continued).

NAMES OF ACADEMIES.	ANNUAL REVENUE.			ANNUAL EXPENDITURE.			Excess (if any) of revenue over expenditure.	Excess (if any) of expenditure over revenue.
	From tuition.	From other sources.	Total revenue.	For teachers' salaries.	For other purposes.	Total expenditure.		
Cortland Academy .....	\$2,229	\$391	\$2,620	\$3,950	\$677	\$4,627	.....	\$2,007
Coxsackie Academy .....	1,282	.....	1,282	1,054	228	1,282	.....	.....
Dansville Seminary .....	1,900	106	2,006	1,600	402	2,002	\$4	.....
Delaware Academy .....	1,724	729	2,453	1,874	978	2,852	.....	399
Delaware Literary Institute,	3,630	1,482	5,112	4,050	1,062	5,112	.....	.....
Deposit Academy .....	1,061.	273	1,334	1,070	264	1,334	.....	.....
East Bloomfield Academy ..	1,067	206	1,273	1,510	95	1,605	.....	332
East Hainburgh Fr'ds' Inst.,	1,211	1,810	3,021	1,225	1,960	3,185	.....	164
Elizabethtown Union School	137	1,413	1,550	1,200	350	1,550	.....	.....
(Acad. Department) .....	440	1,582	2,022	1,860	169	2,029	.....	7
Ellington Un. School (Acad.	108	6,813	6,921	6,200	721	6,921	.....	.....
Department) .....	3,681	997	4,678	3,681	852	4,533	145	.....
Elmira Free Academy .....	408	598	1,006	737	187	924	82	.....
Erasmus Hall Academy .....	4,050	6,497	10,547	4,950	6,457	11,407	.....	860
Evans Academy .....	3,709	3,221	6,930	3,943	2,987	6,930	.....	.....
Fairfield Academy .....	1,025	2,389	3,414	2,679	290	2,969	445	.....
Falley Seminary .....	267	940	1,207	1,000	207	1,207	.....	.....
Forestville Free Academy ..	11,135	1,033	12,168	10,800	1,308	12,108	60	.....
Fort Covington Academy ..	3,450	1,163	4,613	3,250	3,463	6,713	.....	2,100
Fort Edward Col. Institute,								
Fort Plain Sem'y and Fem.								
Collegiate Institute .....								

Franklin Academy, Malone,	1,056	3,002	4,058	2,225	1,733	3,958	100	.....
Franklin Academy, Pratt-								.....
burgh .....	255	1,510	1,765	1,300	390	1,690	75	.....
Friends' Academy .....	2,160	6,680	8,840	3,690	5,070	8,760	80	.....
Friendship Academy .....	1,327	3,079	4,406	1,375	6,614	7,989		3,583
Genesee Valley Seminary ..	1,100	244	1,344	1,344	164	1,508		164
Genesee Wesleyan Seminary,	3,105	7,000	10,105	8,349	1,756	10,105		.....
Genesee ..	1,185	154	1,339	1,237	113	1,350		11
Genesee ..	1,125	872	1,997	970	938	1,908	59	.....
Geneva Clas'l & Un. School,	115	14,364	14,479	7,310	7,550	14,860		381
Gilbertsville Academy .....	1,225	558	1,783	1,560	265	1,825		42
Glen's Falls Academy .....	3,204	530	3,734	2,699	1,035	3,734		.....
Gloversville Un. Sch'l (Acad.								.....
Department) .....	302	13,127	13,429	7,140	6,113	13,253	176	.....
Gouverneur Wesleyan Sem.,	1,924	1,538	3,463	3,136	1,258	4,394		932
Grammar School of Madison								.....
University .....	883	973	1,856	1,655	201	1,856		.....
Greenville Academy .....	500	54	554	500	28	528	26	.....
Greenwich Un. Sch'l (Acad.								.....
Department) .....	35	3,973	4,008	2,865	1,143	4,008		.....
Griffith Institute .....	1,256	447	1,703	1,453	250	1,703		.....
Groton Academy .....	1,129	277	1,406	1,301	105	1,406		.....
Halfmoon Academy .....	826	312	1,138	963	175	1,138		.....
Hamburgh Un. Sch'l (Acad.								.....
Department) .....	120	3,050	3,170	2,348	818	3,166	4	.....
Haverling Un. School (Acad.								.....
Department) .....	496	4,491	4,987	3,200	1,787	4,987		.....
Holland Patent Union Sch'l								.....
(Acad. Department) .....	720	1,620	2,340	2,117	223	2,340		.....

## ACADEMIES.

## SCHEDULE No. 6 — (Continued).

NAMES OF ACADEMIES.	ANNUAL REVENUE.			ANNUAL EXPENDITURE.			Excess (if any) of revenue over expenditure.	Excess (if any) of expenditure over revenue.
	From tuition.	From other sources.	Total revenue.	For teachers' salaries.	For other purposes.	Total expenditure.		
Holley Union School (Acad. Department) .....	\$390	\$2,448	\$ 2,838	\$2,107	\$740	\$2,847	.....	\$9
Hoosick Falls Union School (Acad. Department) .....	226	1,449	1,675	1,400	275	1,675	.....	.....
Hudson Academy .....	4,923	810	5,733	4,647	790	5,437	\$296	.....
Hungerford Col. Institute..	6,394	8,578	14,972	6,443	9,931	16,374	.....	1,402
Huntington Union School..	308	2,383	2,691	2,245	446	2,691	.....	.....
Ithaca Academy .....	4,224	1,268	5,492	4,519	950	5,469	23	.....
Jamestown Union School and Col. Inst. ....	2,988	2,266	5,254	5,216	38	5,254	.....	.....
Johnstown Union School (Acad. Department). ...	13	1,374	1,387	944	443	1,387	.....	.....
Jordan Academy .....	908	1,621	2,529	1,736	831	2,567	.....	38
Keeseville Academy .....	296	1,856	2,152	1,966	186	2,152	.....	.....
Kingston Academy .....	34	2,586	2,620	2,620	.....	2,620	.....	.....
Lansingburgh Academy .....	.....	1,132	1,132	302	65	367	765	.....
Lawrenceville Academy .....	760	414	1,174	1,054	160	1,214	.....	40
Leavenworth Institute .....	144	2,319	2,463	2,208	180	2,388	75	.....
Le Roy Academic Institute,	7,134	2,466	9,600	6,507	3,093	9,600	.....	.....
Liberty Normal Institute..	554	306	860	700	160	860	.....	.....
Lockport Union School ....	2,513	8,465	10,978	8,871	2,107	10,978	.....	.....
Lowville Academy .....	1,883	3,194	5,077	3,409	1,538	4,947	130	.....

Lyons Union School.....	258	7,021	7,279	5,797	1,866	7,663	.....	384
Macedon Academy.....	400	882	732	700	305	1,005	.....	273
McGrawville Union School (Acad. Dept.).....	151	1,468	1,619	1,700	221	1,921	.....	302
Marion Collegiate Institute..	1,025	241	1,266	1,159	107	1,266	.....	.....
Marshall Seminary of Easton,	1,000	2,053	3,053	1,100	1,953	3,053	.....	.....
Martin Institute .....	1,307	260	1,567	1,540	161	1,701	.....	134
Massena Union School (Acad. Department) .....	200	466	666	666	.....	666	.....	.....
Mayville Un. School (Acad. Department) .....	216	2,666	2,882	2,005	841	2,846	36	.....
Mechanicville Academy.....	3,078	606	3,684	3,200	309	3,509	175	.....
Medina Free Academy.....	112	2,364	2,476	2,300	176	2,476	.....	.....
Medina Academy .....	1,652	644	2,296	1,808	488	2,296	.....	.....
.....	982	553	1,535	1,400	135	1,535	.....	.....
.....	800	298	1,093	846	247	1,093	.....	.....
.....	727	1,666	2,393	2,100	293	2,393	.....	.....
Moravia Un. School (Acad. Department) .....	586	1,840	2,426	1,786	640	2,426	.....	.....
Mount Morris Union School (Acad. Dept.) .....	1,291	1,777	3,068	2,482	1,174	3,656	.....	588
Munro Collegiate Institute..	806	144	950	748	173	921	29	.....
Naples Academy .....	1,700	666	2,366	2,167	119	2,286	80	.....
Nassau Academy .....	443	4,696	5,139	3,888	1,182	5,070	69	.....
Newark Un. School & Acad.,	1,491	834	2,825	1,967	518	2,485	.....	160
New Berlin Academy .....	2,124	292	2,416	2,216	200	2,416	.....	.....
New Berlin Academy .....	530	744	1,274	1,013	261	1,274	.....	.....
N. Y. Conference Seminary,	2,824	610	3,434	2,989	2,836	5,825	.....	2,391
Norwich Academy .....	2,328	187	2,515	2,338	233	2,571	.....	56
Nunda Academy .....								

## ACADEMIES.

SCHEDULE No. 6—(Continued).

NAMES OF ACADEMIES.	ANNUAL REVENUE.			ANNUAL EXPENDITURE.			Excess (if any) of revenue over expenditure.	Excess (if any) of expenditure over revenue.
	From tuition.	From other sources.	Total revenue.	For teachers' salaries.	For other purposes.	Total expenditure.		
Ogdensb'gh Educat'l Inst....	\$390	\$2,106	\$2,496	\$2,326	\$170	\$2,496	.....	.....
Oneida Seminary .....	1,604	110	1,714	1,934	1,002	2,936	.....	\$1,222
Onondaga Academy.....	476	1,503	1,979	1,950	.....	1,950	\$29	.....
Ontario Female Seminary..	5,362	237	5,599	4,893	581	5,474	125	.....
Oswego High School .....	54	4,144	4,198	3,594	604	4,198	.....	.....
Owego Free Academy .....	308	2,592	2,900	2,900	.....	2,900	.....	.....
Oxford Academy.....	1,815	1,768	3,583	3,300	580	3,880	.....	297
Packer Collegiate Institute,	49,180	2,329	51,509	34,780	13,613	48,393	3,116	.....
Palatine Bridge Un. School,	.....	1,890	1,890	1,215	685	1,900	.....	10
Palmyra Classical Un. Sch'l,	122	3,975	4,097	2,750	1,024	3,774	323	.....
Peekskill Academy.....	2,959	1,290	4,249	2,959	474	3,433	816	.....
Penn Yan Academy.....	2,422	3,007	5,429	4,178	1,231	5,409	20	.....
Perry Academy.....	2,600	119	2,719	2,500	219	2,719	.....	.....
Phelps Un. & Classical Sch'l,	149	3,517	3,666	2,634	737	3,371	295	.....
Phipps Union Seminary....	2,019	112	2,131	2,475	340	2,815	.....	684
Pike Seminary.....	800	345	1,145	1,145	.....	1,145	.....	.....
Plattsburgh High School...	200	2,770	2,970	2,000	770	2,770	200	.....
Pompey Academy.....	252	143	395	450	48	498	.....	103
Port Byron Free School and Academy .....	392	2,595	2,987	2,512	564	3,076	.....	89
Port Jervis Union School (Acad. Dept.) .....	.....	2,076	2,076	2,000	30	2,030	46	.....

Pulaski Academy .....	1,852	1,143	2,995	2,750	245	2,995	.....	.....
Red Creek Union Academy,	1,781	1,396	3,177	1,475	730	2,205	972	.....
Rochester Female Academy,	2,797	78	2,870	2,628	242	2,870	.....	.....
Rochester Free Academy....	120	7,369	7,489	6,820	669	7,489	.....	.....
Rogersville Union Seminary,	751	817	1,568	1,328	240	1,568	.....	.....
Rome Academy .....	250	4,108	4,358	3,813	545	4,358	.....	.....
Rural Seminary .....	898	533	1,431	1,366	65	1,431	.....	.....
Rushville Un. School (Acad. Department) .....	500	3,901	4,401	2,200	440	2,640	1,761	.....
Sandy Hill Un. Sch'l (Acad. Department) .....	400	6,365	6,765	4,830	1,935	6,765	.....	.....
Saratoga Springs Un. School (Acad. Department) .....	30	4,167	4,197	2,050	2,147	4,197	.....	.....
Sauquoit Academy .....	1,000	20	1,020	1,000	26	1,026	.....	6
Schenectady Union School (Acad. ....	390	3,010	3,400	3,150	250	3,400	.....	.....
Seneca Female Academy.....	.....	12,585	12,585	7,913	4,672	12,585	.....	.....
Sherburne Un. Sch'l (Acad. Department) .....	370	1,334	1,704	1,364	340	1,704	.....	.....
Skaneateles Un. Sch'l (Acad. Department) .....	406	4,227	4,633	2,885	1,455	4,340	293	.....
Sodus Academy .....	901	808	1,709	1,499	210	1,709	.....	.....
Spencertown Academy .....	127	717	844	1,196	99	1,295	.....	451
S. S. Seward Institute .....	1,700	1,433	3,133	1,700	1,211	2,911	222	.....
Starkey Seminary .....	2,902	3,014	5,916	2,954	2,221	5,175	741	.....
Syracuse High School .....	563	11,333	11,896	9,571	2,325	11,896	.....	.....
Ten Broeck Free Academy,	1,282	4,033	5,315	3,608	894	4,497	818	.....
Troy Academy .....	4,360	40	4,400	4,047	358	4,400	.....	.....
Troy Female Seminary .....	6,860	633	7,493	8,093	1,500	9,593	.....	2,100

## SCHEDULE No. 6 — (Continued).

NAMES OF ACADEMIES.	ANNUAL REVENUE.			ANNUAL EXPENDITURE.			Excess (if any) of revenue over expenditure.	Excess (if any) of expenditure over revenue.
	From tuition.	From other sources.	Total revenue.	For teachers' salaries.	For other purposes.	Total expenditure.		
Troy High School .....	\$179	\$5,312	\$5,491	\$4,827	\$664	\$5,491	.....	.....
Trumansburgh Academy...	558	173	731	951	175	1,126	.....	\$395
Unadilla Academy .....	1,003	.....	1,003	.....	.....	.....	.....	.....
Union Academy of Belleville	1,386	548	1,934	1,684	250	1,934	.....	.....
Utica Academy .....	124	8,271	8,395	7,300	1,095	8,395	.....	.....
Vernon Academy .....	98	5	103	98	5	103	.....	.....
Wallkill Academy .....	246	4,724	4,970	4,575	395	4,970	.....	.....
Walton Union School (Acad. Department) .....	613	2,504	3,117	3,107	312	3,419	.....	302
Warrensburgh Academy ...	632	518	1,150	1,056	94	1,150	.....	.....
Warsaw Un. School (Acad. Department) .....	254	27,552	27,806	2,137	11,923	14,060	\$13,746	.....
Warwick Institute .....	208	1,258	1,466	1,200	266	1,466	.....	.....
Washington Academy .....	1,789	20,788	22,577	2,377	20,200	22,577	.....	.....
Waterford Un. Sch'l (Acad. Department) .....	.....	2,408	2,408	2,408	.....	2,408	.....	.....
Waterloo Un. School (Acad. Department) .....	523	9,930	10,453	4,145	5,746	9,891	562	.....
Watertown High School ...	800	4,643	5,443	4,500	943	5,443	.....	.....
Watkins Acad. Un. School,	393	2,068	2,461	1,900	405	2,305	156	.....
Waverly Un. School (Acad. Department) .....	408	4,078	4,486	2,100	2,386	4,486	.....	.....

## ACADEMIES.

	578	246	824	747	54	801	23	.....
Webster Academy .....	1,373	13,149	14,522	6,794	9,030	15,824	.....	1,302
Westfield Un. Sch'l (Acad. Department) .....	44	1,032	1,076	728	247	975	101	.....
West Hebron Union School (Acad. Department) .....	284	1,242	1,526	1,316	183	1,449	77	.....
Westport Un. Sch'l (Acad. Department) .....	1,747	2,173	3,920	2,420	1,500	3,920	.....	.....
West Winfield Academy .....	7,343	12,214	19,557	6,500	15,324	21,824	.....	2,267
Whitewater Seminary .....	462	3,224	3,686	2,330	1,293	3,623	63	.....
Wilson Union School (Acad. Department) .....	430	2,520	2,950	2,135	334	2,469	481	.....
Windsor Un. School (Acad. Department) .....	153	1,533	1,691	1,600	91	1,691	.....	.....
Woodhull Academy .....	2,000	861	2,861	2,250	401	2,651	210	.....
Yates Academy .....	832	374	1,206	1,206	.....	1,206	.....	.....
Yates Union School (Acad. Department) .....	60	14,690	14,750	1,809	11,348	18,157	1,593	.....
	\$446,829	\$601,810	\$1,048,639	\$684,614	\$374,780	\$1,059,394	\$40,854	\$51,609



## SCHEDULE No. 7;

*Containing abstracts from the Academy Reports for the academic year 1871-72, showing the number and sex of the teachers employed, the number of teachers who intend to make teaching a profession, and the number of volumes in the library of each academy.*

NAMES OF ACADEMIES.	NUMBER OF TEACHERS.			No. who intend to make teaching a profession.	No. of volumes in academy library.
	Male.	Female.	Total.		
Academy at Little Falls .....	1	1	2	2	819
Addison Union School (Aca. Dep.),	1	6	7	5	180
Adelphi Academy .....	11	19	30	18	578
Afton Union School (Acad. Dept.),	1	1	2	2	132
Albany Academy .....	6	5	11	..	1,021
Albion Academy .....	2	3	5	4	625
Alfred University (Acad. Dept.)...	10	6	16	12	5,106
Almond Academy .....	3	6	9	6	140
Amsterdam Academy .....	2	6	8	8	348
Arcade Union School (Acad. Dep.),	..	3	3	1	208
Argyle Academy .....	2	2	4	2	943
Attica Union School (Acad. Dept.),	1	4	5	5	400
Auburn Academic High School...	2	3	5	4	300
Augusta Academy .....	1	....	1	..	221
Aurora Academy .....	3	1	4	3	649
Baldwinsville Free Academy .....	1	3	4	4	446
Batavia Union School (Aca. Dep.),	1	1	2	1	2,429
Binghamton Acad. (Central High School) .....	4	4	8	..	2,285
Black River Conference Seminary,	3	3	6	2	508
Brookfield Academy .....	..	2	2	1	82
Brooklyn Col. and Polytech. Inst..	25	2	27	..	2,056
Buffalo Central School .....	5	8	13	12	655
Buffalo Female Academy .....	3	7	10	9	1,211
Cambridge Washington Academy,	1	5	6	5	1,262
Canandaigua Academy .....	6	....	6	3	945
Canastota Union Sch. (Acad. Dep.),	1	4	5	3	216
Candor Union School (Acad. Dep.),	1	3	4	4	259
Canisteo Academy .....	1	4	5	5	99
Canton Union School (Acad. Dep.),	1	6	7	7	500
Carthage Union Sch. (Acad. Dep.),	1	2	3	3	372
Cary Collegiate Seminary .....	3	3	6	6	743
Catskill Free Academy .....	1	1	2	2	67
Cayuga Lake Academy .....	1	3	4	4	2,735
Central N. Y. Conference Seminary,	9	4	13	10	3,026
Chamberlain Institute .....	8	4	12	11	100
Cincinnati Academy .....	1	3	4	3	332

SCHEDULE No. 7 — ( *Continued* ).

NAMES OF ACADEMIES.	NUMBER OF TEACHERS.			No. who intend to make teaching a profession.	No. of volumes in academy library.
	Male.	Female.	Total.		
Clarence Classical Union School...	1	1	2	2	382
Claverack Academy and H. R. Inst.,	11	15	26	23	1,265
Clinton Gram. School (Fem. Dept.),	2	7	9	..	800
Clinton Liberal Institute.....	4	10	14	11	1,632
Corning Free Academy.....	1	2	3	3	220
Cortland Academy.....	3	2	5	5	1,615
Coxsackie Academy.....	1	3	4	..	121
Dansville Seminary .....	2	5	7	4	669
Delaware Academy .....	2	2	4	4	1,433
Delaware Literary Institute .....	5	4	9	8	1,876
Deposit Academy.....	1	4	5	4	147
East Bloomfield Academy.....	1	2	3	3	717
East Hamburg Friends' Inst....	1	2	3	3	44
Egberts High School.....	1	....	1	1	1,651
Elizabethtown Union School (Ac. Department) .....	1	....	1	1	200
Ellington Union School (Ac. Dept.),	1	2	3	3	250
Elmira Free Academy.....	2	4	6	6	594
Erasmus Hall Academy.....	4	1	5	5	2,742
Evans Academy .....	1	1	2	..	312
Fairfield Academy.....	5	4	9	5	1,550
Falley Seminary .....	3	4	7	7	726
Forestville Free Academy .....	1	3	4	4	374
Fort Covington Academy .....	1	....	1	1	176
Fort Edward Collegiate Inst.....	9	4	13	10	732
Fort Plain Seminary and Female Col. Inst.....	4	5	9	8	141
Franklin Academy, Malone .....	1	1	2	1	1,190
Franklin Academy, Plattsburgh ...	3	2	5	3	1,410
Friends' Academy .....	2	4	6	6	455
Friendship Academy.....	1	3	4	2	199
Genesee Valley Seminary.....	2	3	5	4	331
Genesee Wesleyan Seminary .....	8	8	16	16	1,299
Genesee and Wyoming Seminary..	1	1	2	1	569
Geneseo Academy .....	2	4	6	6	950
Geneva Classical and Union School,	4	14	18	18	1,228
Gilbertsville Academy.....	1	2	3	3	469
Glen's Falls Academy .....	3	6	9	6	404
Gloversville Union School (Acad. Department) .....	2	....	2	1	209
Gouverneur Wesleyan Seminary..	3	4	7	4	621

SCHEDULE No. 7—( *Continued* ).

NAMES OF ACADEMIES.	NUMBER OF TEACHERS.			No. who intend to make teaching a profession.	No. of volumes in academy library.
	Male.	Female.	Total.		
Grammar School of Mad. Univ...	6	....	6	2	660
Greenville Academy .....	1	....	1	1	386
Greenwich Union Sch. (Aca. Dep.),	1	5	6	..	615
Griffith Institute.....	2	6	8	7	241
Groton Academy .....	2	3	5	4	678
Halfmoon Academy.....	1	3	4	4	123
Hamburgh Union Sch. (Aca. Dep.),	1	3	4	4	321
Haverling Union Sch. (Aca. Dep.),	1	3	4	..	120
Holland Patent Union School (Aca. Department) .....	1	4	5	5	478
Holley Union School (Acad. Dep.),	2	4	6	5	538
Hoosick Falls Union School (Acad. Department) .....	..	3	3	2	656
Hudson Academy .....	3	3	6	5	191
Hungerford Collegiate Institute...	7	6	13	11	814
Huntington Union School.....	4	2	6	4	670
Ithaca Academy .....	4	6	10	..	541
Jamestown Union Sch. and Col. Inst.	3	5	8	8	821
Johnstown Union Sch. (Aca. Dep.),	1	....	1	1	591
Jordan Academy .....	1	2	3	3	434
Keeseville Academy.....	3	2	5	2	276
Kingston Academy .....	2	1	3	3	733
Lansingburgh Academy .....	..	....	....	..	428
Lawrenceville Academy .....	1	3	4	2	367
Leavenworth Institute.....	1	4	5	4	444
Le Roy Academic Institute .....	4	4	8	7	213
Liberty Normal Institute .....	3	3	6	3	239
Lockport Union School.....	4	11	15	13	270
Lowville Academy.....	2	4	6	5	2,289
Lyons Union School .....	3	14	17	13	942
Macedon Academy.....	1	1	2	1	234
McGrawville Union Sch. (Ac. Dep.),	1	2	3	2	112
Marion Collegiate Institute.....	2	2	4	4	378
Marshall Seminary of Easton.....	1	2	3	3	254
Martin Institute .....	1	3	4	4	69
Massena Union School (Aca. Dep.),	1	1	2	..	108
Mayville Union School (Aca. Dep.),	2	3	5	5	424
Mechanicville Academy .....	2	5	7	5	252
Medina Free Academy .....	2	4	6	5	792
Mexico Academy .....	2	3	5	5	1,135
Middlebury Academy .....	1	2	3	2	946

## SCHEDULE No. 7 — (Continued).

NAMES OF ACADEMIES.	NUMBER OF TEACHERS.			No. who intend to make teaching a profession.	No. of volumes in academy library.
	Male.	Female.	Total.		
Montgomery Academy .....	3	3	6	..	516
Moravia Un. School (Acad. Dept.),	1	1	2	2	343
Mount Morris U. Sch'l (Acad. Dep.)	1	2	3	2	499
Munro Collegiate Institute .....	2	2	4	2	830
Naples Academy .....	1	3	4	3	999
Nassau Academy .....	1	2	3	2	63
Newark Un. School and Academy,	2	8	10	5	660
New Berlin Academy .....	1	5	6	3	342
New Paltz Academy .....	2	2	4	3	650
New York Conference Seminary..	3	3	6	..	360
Norwich Academy .....	3	2	5	4	838
Nunda Academy .....	2	6	8	7	302
Ogdensburgh Educational Institute,	2	2	4	1	3,142
Oneida Seminary .....	2	3	5	4	323
Onondaga Academy .....	1	2	3	3	1,000
Ontario Female Seminary .....	3	6	9	8	950
Oswego High School .....	2	3	5	5	4,010
Owego Free Academy .....	2	3	5	3	569
Oxford Academy .....	2	4	6	3	1,236
Packer Collegiate Institute .....	4	33	37	37	3,024
Palatine Bridge Union School....	1	1	2	..	271
Palmyra Classical Union School...	1	4	5	5	1,147
Peckskill Academy .....	4	..	4	2	639
Penn Yan Academy .....	3	3	6	6	829
Perry Academy .....	1	4	5	5	550
Phelps Union and Classical School,	2	7	9	7	515
Phipps Union Seminary .....	1	6	7	7	571
Pike Seminary .....	2	3	5	3	367
Plattsburgh High School .....	2	2	4	2	30
Pompey Academy .....	2	..	2	2	411
Port Byron Free School & Acad..	1	5	6	6	963
Port Jervis Un. Sch'l (Acad. Dep.),	1	..	1	1	219
Pulaski Academy .....	2	4	6	6	370
Red Creek Union Academy .....	1	3	4	1	174
Rochester Female Academy .....	..	8	8	8	201
Rochester Free Academy .....	4	4	8	8	....
Rogersville Union Seminary .....	2	3	5	4	221
Rome Academy .....	1	4	5	5	947
Rural Seminary .....	2	2	4	2	639
Rushville Un. School (Acad. Dep.),	1	3	4	4	300
Sandy Hill Un. Sch'l (Acad. Dep.),	1	10	11	11	630

SCHEDULE No. 7 — (*Continued*).

NAMES OF ACADEMIES.	NUMBER OF TEACHERS.			No. who intend to make teaching a profession.	No. of volumes in academy library.
	Male.	Female.	Total.		
Saratoga Springs Union School (Ac. Department) .....	2	1	3	3	150
Sauquoit Academy .....	1	2	3	3	106
Schenectady Union Sch. (Ac. Dep.),	3	3	6	4	.....
Seneca Falls Academy .....	1	2	3	..	279
Sherburne Union Sch. (Ac. Dep.),	1	2	3	3	655
Skaneateles Union Sch. (Ac. Dep.),	2	3	5	5	755
Sodus Academy .....	1	2	3	..	229
Spencertown Academy .....	1	1	2	1	238
S. S. Seward Institute .....	2	6	8	3	149
Starkey Seminary .....	1	5	6	5	1,527
Syracuse High School .....	4	6	10	10	11,601
Ten Broeck Free Academy .....	3	4	7	7	365
Troy Academy .....	4	2	6	4	149
Troy Female Seminary .....	4	14	18	12	1,565
Troy High School .....	4	2	6	5	578
Trumansburgh Academy .....	1	1	2	2	438
Unadilla Academy .....	..	2	2	1	317
Union Academy of Belleville .....	4	3	7	3	792
Utica Academy .....	6	2	8	8	434
Vernon Academy .....	1	1	2	2	458
Wallkill Academy .....	2	4	6	6	498
Walton Union School (Ac. Dep.) ..	1	5	6	..	519
Warrensburgh Academy .....	2	3	5	4	174
Warsaw Union School (Ac. Dep.),	2	2	4	..	1,495
Warwick Institute .....	1	1	2	..	259
Washington Academy .....	1	3	4	4	513
Waterford Union School (Ac. Dep.),	1	2	3	3	250
Waterloo Union School (Ac. Dep.),	2	9	11	..	1,106
Watertown High School .....	2	2	4	4	1,855
Watkins Academic Union School,	1	1	2	2	569
Waverly Union School (Ac. Dep.),	1	1	2	..	370
Webster Academy .....	1	...	1	1	113
Westfield Union School (Ac. Dep.),	5	9	14	..	1,299
West Hebron Union Sch. (Ac. Dep.),	1	3	4	4	64
Westport Union School (Ac. Dep.),	1	5	6	..	410
West Winfield Academy .....	2	3	5	5	553
Whitestown Seminary .....	4	8	12	12	1,318
Whitney's Point Union School (Acad. Department) .....	1	4	5	5	146
Wilson Union School (Acad. Dep.),	1	3	4	4	846

## SCHEDULE No. 7 — (Continued).

NAMES OF ACADEMIES.	NUMBER OF TEACHERS.			No. who intend to make teaching a profession.	No. of volumes in academy library.
	Male.	Female.	Total.		
Windsor Union School (Ac. Dep.),	1	2	3	..	681
Woodhull Academy.:.....	3	3	6	3	122
Yates Academy.....	1	2	3	3	578
Yates Union School (Ac. Dep.) ...	..	2	2	2	833
Total .....	462	721	1,183	848	147,490

## SCHEDULE No. 8.

Containing a statement of all moneys apportioned to Academies, from the Literature Fund, by the Regents of the University for the purchase of books and philosophical apparatus for the use of such Academies, pursuant to the act of  
*relative to the distribution and application of the revenue of said fund, passed April 22, 1834; such apportionment having been made to such Academies only as had themselves raised by contribution, from sources other than their own corporate property, funds equal to the amount so apportioned, to be expended in the same manner.*

NAMES OF ACADEMIES.	AMOUNTS APPORTIONED.		
	Before August, 1872.	In August, 1872, and January, 1873.	Total.
Academy at Little Falls .....	\$645 00	.....	\$645 00
Academy of Dutchess County .....	250 00	.....	250 00
Addison Academy and Union School .....	100 00	\$100 00	200 00
Albany Academy .....	935 00	.....	935 00
Albany Female Academy .....	1,000 00	.....	1,000 00
Albany Female Seminary .....	930 00	.....	930 00
Albion Academy .....	477 00	.....	477 00
Alfred University (Academic Department) .....	1,304 98	* 250 00	1,554 98
Amenia Seminary .....	1,006 90	.....	1,006 90
Ames Academy .....	101 00	.....	101 00
Amsterdam Female Seminary .....	427 75	.....	427 75
Angelica Academy .....	25 00	.....	25 00
Antwerp Liberal Literary Institute .....	351 00	.....	351 00
Argyle Academy .....	272 00	.....	272 00
Astoria Institute .....	250 00	.....	250 00
Attica Union School .....	152 70	80 00	232 70

Academy Union School (formerly Auburn Academy) . . . . .	705 00	705 00
Auburn Female Seminary . . . . .	250 00	250 00
Augusta Academy . . . . .	285 00	285 00
Aurora Academy . . . . .	375 00	375 00
. . . . .	151 00	151 00
. . . . .	212 00	212 00
. . . . .	344 00	344 00
Batavia Union School . . . . .	1,272 04	1,325 00
Batavia Female Academy . . . . .	94 25	94 25
Bethany Academy . . . . .	55 00	55 00
Binghamton Academy . . . . .	1,104 50	1,354 50
Black River Literary and Religious Institute . . . . .	571 00	571 00
Brockport Collegiate Institute . . . . .	858 95	858 95
Brookfield Academy . . . . .	297 00	297 00
Brooklyn Female Academy . . . . .	1,000 00	1,000 00
Brooklyn Collegiate and Polytechnic Institute . . . . .	1,500 00	1,500 00
Buffalo Central School . . . . .	250 00	250 00
Buffalo Literary and Scientific Academy . . . . .	100 00	100 00
Buffalo Female Academy . . . . .	756 71	756 71
Academy . . . . .	849 58	849 58
. . . . .	539 00	539 00
. . . . .	500 00	500 00
. . . . .	150 00	250 00
. . . . .	80 00	215 00
Candor Free Academy . . . . .	250 00	250 00
Canisteo Academy . . . . .	407 95	407 95
Canton Academy . . . . .	552 00	552 00
Cary Collegiate Seminary . . . . .	250 00	250 00
Catskill Free Academy . . . . .	1,147 00	1,147 00
Cayuga Academy, and Cayuga Lake Academy . . . . .		

\* In August, 1873.



SCHEDULE No. 8 — (Continued).

NAMES OF ACADEMIES.	AMOUNTS APPORTIONED.		
	Before August, 1873.	In August, 1872, and January, 1873.	Total.
ACADEMIES.			
Chamberlain Institute (formerly Randolph Academy Association),	\$550 00	\$250 00	\$800 00
Champlain Academy .....	297 00	.....	297 00
Cherry Valley Academy .....	565 00	.....	565 00
Chester Academy .....	755 00	.....	755 00
Cincinnatus Academy .....	274 00	.....	274 00
Clarence Classical Union School .....	400 00	250 00	650 00
Clarkson Academy .....	330 00	.....	330 00
Claverack Academy and Hudson River Institute .....	1,351 00	.....	1,351 00
Clermont Academy .....	51 00	.....	51 00
Clinton Academy .....	36 00	.....	36 00
Clinton Grammar School .....	738 87	.....	738 87
Clinton Liberal Institute .....	737 75	.....	737 75
Clinton Seminary .....	168 41	.....	168 41
Clover Street Seminary .....	275 00	.....	275 00
Corning Free Academy .....	75 00	.....	75 00
Cortland Academy .....	1,174 50	.....	1,174 50
Cortlandville Academy .....	574 12	.....	574 12
Coxsackie Academy .....	25 00	.....	25 00
Dansville Seminary .....	684 26	.....	684 26
Deer Park Union School (Port Jervis Union School, which see) ..			
De Lancey Institute .....	150 00	.....	150 00
Delaware Academy .....	798 19	.....	798 19

Delaware Literary Institute .....	2,444 15	.....	2,444 15
Deposit Academy .....	215 00	.....	215 00
De Ruyter Institute .....	549 00	.....	549 00
Dundee Academy .....	38 00	.....	38 00
East Bloomfield Academy .....	825 00	.....	825 00
Elizabethtown Union School .....	32 50	.....	32 50
Ellington Academy .....	49 00	.....	49 00
Erasmus Hall Academy (formerly Elmira Academy) .....	1,216 19	† 250 00	1,466 19
Essex County Academy .....	195 00	.....	195 00
Evans Academy .....	50 00	.....	50 00
Fairfield Academy .....	22 50	.....	22 50
Falley Seminary .....	1,570 00	.....	1,570 00
Farmers' Hall Academy .....	1,150 00	.....	1,150 00
Fayetteville Academy .....	115 00	.....	115 00
Fonda Academy .....	303 50	.....	303 50
Forestville Free Academy .....	165 00	.....	165 00
Fort Covington Academy .....	171 00	.....	171 00
Fort Edward Col. Inst. (formerly Wash. Co. Sem'y and Col. Inst.),	234 50	.....	234 50
Fort Plain Seminary .....	828 17	110 00	938 17
Franklin Academy, Malone .....	275 00	.....	275 00
Fredonia Academy .....	600 00	.....	600 00
.....	1,084 00	.....	1,084 00
.....	325 00	125 00	450 00
.....	194 40	.....	194 40
.....	165 00	.....	165 00
.....	236 00	.....	236 00
.....	250 00	.....	250 00
.....	318 00	.....	318 00

† In August, 1872.

\* Apparatus destroyed by fire in 1886, previous to which time 1883 had been apportioned by the Regents.

Genesee Conference Seminary (now Pike Seminary, which see).

SCHEDULE No. 8—(Continued).

ACADEMIES.

NAMES OF ACADEMIES.	AMOUNTS APPORTIONED.		
	Before August, 1873.	In August, 1872, and January, 1873.	Total.
Genesee Valley Seminary .....	\$80 00	.....	\$80 00
Genesee Wesleyan Seminary .....	1,386 00	* \$250 00	1,636 00
Geneseo Academy (formerly Livingston High School) .....	575 00	.....	575 00
Geneva Classical and Union School .....	164 25	250 00	414 25
Genoa Academy .....	160 00	.....	160 00
Gilbertsville Academy and Collegiate Institute .....	355 00	.....	355 00
Glen's Falls Academy .....	364 00	.....	364 00
Gloversville Union Seminary .....	421 72	.....	421 72
Gouverneur High School and Gouverneur Wesleyan Seminary ..	805 00	.....	805 00
Grammar School of Madison University .....	250 00	.....	250 00
Greenbush and Schodack Academy .....	165 00	.....	165 00
Greenville Academy .....	182 50	.....	182 50
Griffith Institute (formerly Springville Academy) .....	657 00	.....	657 00
Groton Academy .....	655 00	.....	655 00
Hamburgh Union School .....	105 00	.....	105 00
Hamilton Academy .....	686 50	.....	686 50
Hamilton Female Seminary .....	250 00	.....	250 00
Hartwick Seminary .....	262 00	.....	262 00
Haverling Union School (Bath) .....	250 00	.....	250 00
Herkimer Academy .....	150 00	.....	150 00
Hobart Hall Institute .....	215 00	.....	215 00
Holley Union School (Acad. Dept.) .....	.....	195 00	195 00

Hubbardsville Academy .....	100 00	.....	100 00
Hudson Academy .....	150 00	.....	150 00
Hungerford Collegiate Institute .....	750 00	* 250 00	1,000 00
Huntington Union School .....	105 00	.....	105 00
Ingham University, Academical Department (formerly Le Roy Female Seminary, and Ingham Collegiate Institute) .....	1,025 00	.....	1,025 00
Ithaca Academy .....	976 87	.....	976 87
Jamestown Academy .....	250 00	.....	250 00
Jamestown Union School and Collegiate Institute .....	500 00	.....	500 00
Jefferson Academy .....	500 00	.....	500 00
Jefferson ite (now Watertown High School, and formerly Black River Literary and Religious Institute) .....	705 00	.....	705 00
Johnstown Union School (formerly Johnstown Academy) .....	715 00	.....	715 00
Jonesville Academy .....	125 00	.....	125 00
Jordan Academy .....	654 50	.....	654 50
Keesville Academy .....	155 00	.....	155 00
Kinderhook Academy .....	400 00	.....	400 00
Kingston Academy .....	448 38	.....	448 38
Knoxville Academy .....	660 00	.....	660 00
Lansingburgh Academy .....	118 00	.....	118 00
Lawrenceville Academy .....	322 00	.....	322 00
Leavenworth Institute .....	125 00	.....	125 00
Le Roy Academic Institute .....	275 77	.....	275 77
Liberty Normal Institute .....	250 00	.....	250 00
Livingston High School (now Genesee Academy, which see) .....	25 00	.....	25 00
Lockport Union School .....	252 62	.....	252 62
Lowville Academy .....	639 42	*69 50	708 92

\* In August, 1879.

## ACADEMIES.

SCHEDULE No. 8—(Continued).

NAMES OF ACADEMIES.	AMOUNTS ALLOTTED.		
	Before August, 1872.	In August, 1872, and January, 1873.	Total.
Lyons Union School (Academical Department).....	.....	* \$60 00	\$160 00
Macedon Academy.....	.....	100 00	470 00
Manlius Academy.....	8470 00	.....	200 75
Marion Collegiate Institute.....	200 75	.....	712 99
Marshall Seminary of Easton.....	712 99	.....	27 42
Massena Union School.....	27 42	.....	200 00
Mayville Union School (formerly Mayville Academy).....	200 00	.....	551 25
Mechanicville Academy.....	551 25	.....	145 00
Medina Free Academy.....	145 00	.....	331 05
Mendon Academy.....	278 33	52 72	150 00
Mexico Academy (formerly Rensselaer Oswego Academy).....	150 00	.....	1,199 05
Middlebury Academy.....	1,199 05	.....	351 40
.....	351 40	.....	250 00
.....	250 00	.....	181 00
.....	181 00	.....	115 00
.....	115 00	.....	58 63
.....	58 63	.....	327 00
Moravia Institute.....	327 00	.....	198 00
Mount Morris Union School.....	198 00	.....	930 00
Mount Pleasant Academy.....	930 00	.....	680 00
Munro Collegiate Institute.....	680 00	.....	640 00
Naples Academy.....	640 00	.....	.....

Nassau Academy .....	87 50	87 50
Newark Union School and Academy .....	800 70	800 70
New Berlin Academy .....	131 11	131 11
New Paltz Academy .....	289 51	289 51
New York Conference Seminary .....	611 00	611 00
North Granville Ladies' Seminary .....	671 25	671 25
North Salem Academy .....	67 00	67 00
Norwich .....	980 00	980 00
Nunda Academy .....	400 00	400 00
Nunda Literary Institute .....	120 00	120 00
Ogdensburgh Academy .....	375 00	375 00
Olean Academy .....	78 00	78 00
Oneida Seminary .....	263 71	263 71
Oneida Conference Seminary .....	1,500 00	1,500 00
Oneida Institute .....	250 00	250 00
Onondaga Academy .....	220 65	220 65
Ontario Female Seminary .....	862 00	914 28
Oranienburg High School .....	125 00	125 00
.....	425 15	425 15
Uwego Academy .....	470 00	470 00
Oxford Academy .....	750 00	750 00
Packer Collegiate Institute .....	1,500 00	1,500 00
Palmyra Classical and Union School .....	250 00	250 00
Parnassus Institute .....	200 00	200 00
Peekskill Academy .....	508 00	628 00
Penn Yan Academy .....	250 00	250 00
Perry Academy .....	150 00	150 00
Phelps Union and Classical School .....	42 50	42 50

+ \$350 by special law, in 1854.

• In August, 1872.

## ACADEMIES

SCHEDULE No. 8 — (Continued).

NAMES OF ACADEMIES	AMOUNT APPORTIONED.		
	Before August, 1872.	In August, 1872, and January, 1873.	Total.
Phipps Union Seminary .....	\$518 00	.....	\$518 00
Pike Seminary (formerly Genesee Conference Seminary) .....	247 83	.....	247 83
Plattsburgh Academy .....	250 00	.....	250 00
Port Byron Free School and Academy .....	507 50	.....	507 50
Port Jervis Union School .....	60 00	.....	60 00
Ponchaikona Female Academy .....	758 49	.....	758 49
.....	250 00	.....	250 00
.....	250 00	.....	250 00
.....	200 00	.....	200 00
Pulaski Academy .....	.....	.....	.....
Randolph Academy Association (now Chamberlain Inst., which see),	.....	.....	.....
Red Creek Union Academy .....	550 00	.....	550 00
Red Hook Academy .....	50 00	.....	50 00
Rensselaerville Academy .....	65 00	.....	65 00
Rensselaer Institute (now Rensselaer Polytechnic Institute) .....	500 00	.....	500 00
Rensselaer Oswego Academy (now Mexico Academy, which see).	.....	.....	.....
Rhinebeck Academy .....	375 00	.....	375 00
Richburgh Academy .....	66 18	.....	66 18
Riga Academy .....	400 00	.....	400 00
Rochester Collegiate Institute (No. 1) .....	750 00	.....	750 00
Rochester High School (No. 1) .....	500 00	.....	500 00
Rochester Free Academy .....	.....	\$250 00	250 00

Rogersville Union Seminary.....	150 00	.....	150 00
Rome Academy.....	525 00	.....	525 00
Rural Seminary.....	250 00	.....	250 00
Rushford Academy.....	355 00	.....	355 00
Rutgers Female Institute.....	250 00	.....	250 00
Sag Harbor Institute.....	125 00	.....	125 00
St. Lawrence Academy.....	543 00	.....	543 00
Sand Lake Academy.....	175 00	.....	175 00
Sauquoit Academy.....	247 94	.....	247 94
.....n and Academy.....	142 00	.....	142 00
School.....	250 00	.....	250 00
.....my.....	404 48	.....	404 48
Seneca Falls Academy.....	197 16	.....	197 16
Seward Female Seminary.....	239 50	.....	239 50
Sodus Academy.....	100 00	.....	100 00
Spencertown Academy.....	119 25	.....	119 25
Springville Academy (now Griffith Institute, which see).....	206 30	.....	206 30
Starkey Seminary.....	900 05	.....	900 05
Stillwater Seminary.....	826 00	.....	826 00
Susquehanna Seminary.....	200 00	.....	200 00
Syracuse Academy.....	456 00	.....	456 00
Syracuse High School.....	250 00	250 00	500 00
Ten Broeck Free Academy.....	500 00	250 00	750 00
Troy Academy.....	480 60	.....	480 60
Troy Female Seminary.....	1,476 41	.....	1,476 41
Troy High School.....	725 00	.....	725 00
Trumansburgh Academy.....	461 00	.....	461 00
Unadilla Academy.....	99 60	.....	99 60



## SCHEDULE No. 8—(Continued).

NAMES OF ACADEMIES.	AMOUNT APPORTIONED.	
	Before August, 1872.	Total.
<i>ACADEMIES.</i>		
Union Academy of Belleville (formerly Union Literary Society) ..	\$879 19	\$879 19
Union Village Academy .....	237 25	237 25
Utica Academy .....	1,181 00	1,181 00
Utica Female Academy .....	150 00	150 00
Vernon Academy .....	565 00	565 00
Wallkill Academy ..	330 00	330 00
Walton Academy .....	470 50	470 50
Walworth Academy .....	545 00	545 00
Warrensburgh Academy .....	44 56	44 56
Warsaw Union School ..	520 00	520 00
Warwick Institute .....	119 50	119 50
Washington Academy .....	626 00	626 00
Washington County Seminary (now Fort Edward Collegiate Inst., which see).		
Waterford Academy .....	100 00	100 00
Waterford Union School .....	.....	100 00
Waterloo Academy .....	250 00	250 00
Waterloo Union School .....	39 25	39 25
Waverly Institute .....	380 00	380 00
Westfield Academy .....	880 00	880 00
West Winfield Academy .....	930 00	930 00
Whitney's Point Union School .....	85 88	85 88

Whitesboro' Academy.....	100 00	.....	100 00
Whitestown Seminary.....	1,279 00	.....	1,279 00
Wilson Collegiate Institute and Union School.....	621 51	150 00	771 51
Windsor Academy.....	167 00	.....	167 00
Whitehall Academy.....	179 00	.....	179 00
Woodhull Academy.....	53 79	200 00	253 79
Yates Academy.....	520 50	.....	520 50
	<b>\$113,382 92</b>	<b>\$4,552 46</b>	<b>\$117,935 38</b>
From which deduct, returned by—			
Riga Academy, 1854.....		\$200 00	
North Salem Academy, 1855.....		17 00	
Brookfield Academy 1856.....		175 00	
Genesee....., 1863.....		16 00	
Medina Academy, 1860.....		25 00	
Cherry Valley Academy, 1864.....		250 00	
Oneida Seminary (part not drawn).....		52 46	
			<b>735 46</b>
			<b>\$117,199 92</b>

## SUMMARY.

	Amount of moneys raised by acad- emies.	Amount of moneys granted by the Re- gents.	Total.
In the year 1835.....	\$1,852 00	\$1,852 00	\$3,704 00
do 1836.....	1,183 00	1,183 00	2,366 00
do 1837.....	2,110 00	2,110 00	4,220 00
do 1838.....	2,475 00	2,475 00	4,950 00
do 1839.....	4,049 15	4,049 15	8,098 30
do 1840.....	3,597 14	3,597 14	7,194 28
do 1841.....	4,337 00	4,337 00	8,674 00
do 1842.....	3,373 00	3,373 00	6,746 00
do 1843.....	1,455 88	1,455 88	2,911 76
do 1844.....	3,423 03	3,423 03	6,846 06
do 1845.....	1,861 00	1,861 00	3,722 00
do 1846.....	2,708 50	2,708 50	5,417 00
do 1847.....	2,602 38	2,602 38	5,204 76
do 1848.....	2,900 27	2,900 27	5,800 54
do 1849.....	1,534 60	1,534 60	3,069 20
do 1850.....	2,979 45	2,979 45	5,958 90
do 1851.....	2,532 31	2,532 31	5,064 62
do 1852.....	2,669 65	2,669 65	5,339 30
do 1853.....	3,119 00	3,119 00	6,238 00
do 1854.....	2,926 07	2,926 07	5,852 14
do 1855.....	2,500 00	2,500 00	5,000 00
do 1856.....	2,452 21	2,452 21	4,904 42
do 1857.....	2,712 85	2,712 85	5,425 70
do 1858.....	4,240 21	4,240 21	8,480 42
do 1859.....	2,798 22	2,798 22	5,596 44
do 1860.....	2,500 00	2,500 00	5,000 00
do 1861.....	2,500 00	2,500 00	5,000 00
do 1862.....	2,500 00	2,500 00	5,000 00
do 1863.....	5,500 00	5,500 00	11,000 00
do 1864.....	3,000 00	3,000 00	6,000 00
do 1865.....	3,291 00	3,291 00	6,582 00
do 1866.....	3,000 00	3,000 00	6,000 00
do 1867.....	3,000 00	3,000 00	6,000 00
do 1868.....	3,000 00	3,000 00	6,000 00
do 1869.....	5,500 00	5,500 00	11,000 00
do 1870.....	4,444 46	4,444 46	8,888 92
do 1871.....	3,755 54	3,755 54	7,511 08
do 1872.....	4,552 46	4,552 46	9,104 92
do 1873.....	3,000 00	3,000 00	6,000 00
	\$117,935 38	\$117,935 38	\$235,870 76

The Regents are in possession of testimony, duly authenticated, showing that the whole of the foregoing amount has been devoted to the purchase of books and apparatus, with the following exceptions: Of the moneys raised and granted in the year

1835,	there is unaccounted for.....	None.
1836,	do do .....	\$217 16
1837,	do do .....	None.
1838,	do do .....	None.
1839,	do do .....	None.
1840,	do do .....	\$133 56
1841,	do do .....	None.
1842,	do do .....	\$11 00
1843,	do do .....	None.
1844,	do do .....	\$100 00
1845,	do do .....	None.
1846,	do do .....	None.
1847,	do do .....	None.
1848,	do do .....	\$2 70
1849,	do do .....	None.
1850,	do do .....	None.
1851,	do do .....	None.
1852,	do do .....	None.
1853,	do do .....	None.
1854,	do do .....	None.
1855,	do do .....	\$250 00
1856,	do do .....	None.
1857,	do do .....	None.
1858,	do do .....	None.
1859,	do do .....	None.
1860,	do do .....	None.
1861,	do do .....	None.
1862,	do do .....	None.
1863,	do do .....	None.
1864,	do do .....	None.
1865,	do do .....	\$15 25
1866,	do do .....	None.
1867,	do do .....	\$5 85
1868,	do do .....	\$75 00
1869,	do do (not drawn).....	\$70 00
1870,	do do .....	None.
1871,	do do .....	\$22 47
1872,	do do .....	None.

But as the above amounts have been suspended from the annual apportionments to the delinquent academies, or will hereafter be accounted for, the State sustains no loss.

SCHEDULE No. 9.

Summary of text-books used in the several academies during the academic year 1871-72. [For the subjects of study pursued during 1867-8, and generally the same during succeeding years, see the Eighty-second Annual Report of the Regents (1869), pp. 498-589.]

ORDINARY ELEMENTARY STUDIES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-71.	1871-72.
<i>Arithmetic.</i>							
1. Adams .....	1	1	1	1	1	1	....
2. Colburn .....	5	...	2	2	2	1	1
3. Cruttenden .....	1	1	1	...	1	...	1
4. Davies .....	58	45	50	37	31	32	37
5. Eaton .....	1	1	2	2	2	3	2
6. Farrar .....	...	...	1	...	...	4	....
7. Felter .....	2	2	2	2	3	3	3
8. French .....	...	...	1	1	5	4	2
9. Greenleaf .....	18	15	13	11	6	5	3
10. Lawrence .....	1	...	...	...	...	...	....
11. Loomis .....	1	...	1	...	1	...	....
12. McCord .....	1	...	...	...	...	...	....
13. Perkins .....	5	1	...	...	...	...	....
14. Quackenbos .....	...	...	3	8	6	7	7
15. Ray .....	1	1	1	...	1	1	1
16. Robinson .....	116	120	133	135	142	142	148
17. Stoddard .....	10	7	8	6	7	9	8
18. Thomson .....	39	28	25	12	8	3	4
19. Walton .....	...	...	...	...	...	1	....
20. Willett and McCord,	1	1	...	...	...	...	....
<i>Book-keeping.</i>							
1. Bennett .....	...	...	...	...	1	...	....
2. Bowen .....	1	...	...	...	...	...	....
3. Bryant and Stratton,	56	77	83	83	82	99	102
4. Crittenden .....	2	1	...	...	1	1	....
5. Eaton .....	1	...	...	...	...	...	....
6. Ellsworth .....	...	...	...	...	1	2	1
7. Fulton and Eastman,	64	61	53	39	38	27	24
8. Hanaford and Payson	10	5	6	5	1	3	2
9. Harris .....	1	...	1	...	...	...	....
10. Hasbrouck .....	...	...	...	...	1	...	....
11. Hitchcock .....	1	...	...	...	...	...	....
12. Lowell .....	1	...	...	...	...	...	....
13. Mahan .....	...	...	1	2	1	...	....
14. Mahew .....	18	15	18	11	13	10	9
15. MSS .....	1	...	...	1	...	...	....
16. Marsh .....	2	3	4	2	1	...	....

## SCHEDULE No. 9—(Continued).

ORDINARY ELEMENTARY STUDIES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
17. Oral Lessons.....	2	1	1	2	...	...	1
18. Packard .....	...	...	...	...	1	1	2
19. Palmer .....	2	2	3	...	...	...	2
20. Payson and Dunton,	14	10	10	9	13	12	13
21. Potter & Hammond,	6	4	4	2	3	2	2
22. Preston .....	1	...	1	...	...	...	...
23. Root.....	1	...	...	...	...	...	...
24. Smith and Martin ..	...	1	2	1	1	2	3
25. Smith and Jenkins..	...	...	...	1	...	...	...
<i>English Grammar.</i>							
1. Brown .....	72	66	75	61	62	58	60
2. Bullions .....	24	20	26	30	30	35	30
3. Clark .....	55	56	58	53	45	34	36
4. Covell .....	3	2	2	...	...	...	...
5. Earle .....	1	1	...	...	...	...	...
6. Greene.....	13	9	7	13	12	12	17
7. Halsey .....	1	1	...	...	...	...	...
8. Hart.....	1	1	2	1	1	1	1
9. Harvey .....	...	...	...	...	...	1	1
10. Kenyon .....	2	2	3	1	1	...	...
11. Kerl .....	13	26	30	28	28	32	34
12. Norton.....	1	1	2	4	4	3	3
13. Pinneo .....	2	2	1	1	1	1	1
14. Quackenbos .....	25	25	29	26	17	20	17
15. Sanders .....	...	...	...	...	1	...	...
16. Sill .....	...	...	...	...	1	...	...
17. Smith .....	3	3	1	...	...	1	1
18. Tower .....	2	1	...	...	...	1	...
19. Weld .....	17	13	14	10	10	6	7
20. Wells .....	4	4	1	1	...	1	...
21. Wilson .....	...	...	...	...	1	1	1
<i>Geography.</i>							
1. Colton .....	...	12	8	7	6	3	5
2. Colton and Fitch...	36	20	14	8	3	8	7
3. Cornell .....	22	18	11	9	10	15	19
4. Fitch .....	19	13	12	4	3	1	...
5. Guyot .....	4	13	30	35	37	33	31
6. Harris .....	1	...	...	...	...	...	...
7. McNally (see Mon- teith) .....	116	120	129	102	86	86	79
8. Mitchell.....	30	29	25	15	10	12	14
[Assembly No. 28.]		28					

## SCHEDULE No. 9 — (Continued).

ORDINARY ELEMENTARY STUDIES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
9. Monteith (Monteith and McNally)....	11	8	21	25	31	27	25
10. Morgan .....	...	...	1	...	...	...	...
11. Morse .....	1	...	...	...	...	...	...
12. Olney .....	1	1	...	...	...	...	...
13. Pierson .....	1	1	1	...	...	...	...
14. Ritter .....	1	2	1	...	...	1	1
15. Shaw and Allen....	1	...	...	...	...	...	...
16. Smith .....	2	1	1	1	...	...	...
17. Somerville .....	2	...	1	...	...	...	...
18. Warner .....	...	...	...	1	1	1	...
19. Warren .....	30	34	44	40	60	63	63
20. Willard .....	1	1	1	1	...	...	...
21. Woodbridge .....	2	2	1	1	...	...	...
<i>Pronunciation.</i>							
1. Sanders .....	1	...	...	...	...	1	1
2. Smart .....	...	...	...	...	...	...	1
3. Spencer .....	...	1	...	1	...	...	...
4. Quackenbos .....	1	1	...	...	...	...	...
5. Reid .....	...	...	...	...	1	...	...
6. Town .....	1	...	...	1	1	...	...
7. Walker .....	1	...	...	1	1	1	2
8. Webster .....	169	167	175	159	140	155	156
9. Worcester .....	29	26	31	31	30	22	28
<i>Reading.</i>							
1. Anderson .....	...	...	...	...	...	1	4
2. Bible .....	...	1	1	2	1	1	1
3. Cleveland .....	1	1	1	...	1	1	1
4. Cooper .....	...	...	...	...	1	...	...
5. Edwards .....	...	...	1	5	18	26	29
6. Hillard .....	3	4	5	3	3	6	5
7. Holbrook .....	...	...	...	...	1	1	1
8. Howe .....	4	...	2	...	1	...	...
9. McElligott .....	...	1	...	1	...	...	...
10. McGuffey .....	1	1	1	1	1	1	1
11. Mandeville .....	...	...	...	...	...	...	1
12. Milton .....	2	2	2	2	2	1	...
13. Mitchell .....	...	...	...	...	...	...	1
14. Monroe .....	...	...	...	...	...	...	1
15. Parker and Watson,	102	107	107	83	80	75	68
16. Randall (Mrs.) .....	...	...	1	1	...	6	9

## SCHEDULE No. 9 — (Continued).

ORDINARY ELEMENTARY STUDIES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
17. Sanders .....	74	74	80	81	70	68	75
18. Sargent .....	1	1	1	4	4	4	....
19. Shakespeare .....	2	2	1	3	5	6	2
20. Smith .....	....	....	....	....	1	....	....
21. Thompson .....	....	1	....	1	1	1	....
22. Town .....	5	3	1	....	1	1	1
23. Webb .....	1	1	2	....	2	3	....
24. Wiley .....	....	....	....	....	3	3	2
25. Willard .....	1	....	....	....	1	....	....
26. Willson .....	20	10	11	6	7	8	10
27. Young .....	....	....	1	1	1	1	....
<i>Penmanship.</i>							
1. Babbittonean .....	....	....	....	9	19	12	9
2. Bryant and Stratton, .....	....	....	....	....	1	2	....
3. Eastman .....	....	....	1	1	3	2	1
4. Elliott .....	....	....	....	....	....	....	1
5. Ellsworth .....	....	....	3	1	....	2	1
6. Gibbs .....	....	....	....	1	....	....	....
7. Graham .....	....	....	....	1	....	....	....
8. Hall .....	....	....	1	....	....	....	....
9. Harper's Series .....	....	....	1	3	1	3	2
10. Hooker .....	....	....	....	....	....	1	....
11. Hopkins .....	....	....	....	....	1	....	....
12. Natural System .....	....	....	....	....	....	1	1
13. Payson, Dunton and Scribner .....	....	....	43	43	42	38	43
14. Potter & Hammond, .....	....	....	10	5	9	8	7
15. Spencer .....	....	....	125	106	89	97	104
16. Williams & Packard, .....	....	....	....	....	1	....	....
<i>Phonography.</i>							
1. Graham .....	....	....	....	....	....	....	1
2. Pitman .....	....	....	....	....	....	....	1
MATHEMATICS AND NATURAL PHILOSOPHY, AND THEIR APPLICATIONS.							
<i>Algebra.</i>							
1. Benedict .....	2	1	1	....	....	....	....
2. Davies (and {Davies' Bourdon) .....	50	49	49	34	31	29	30
3. Day .....	2	1	2	....	....	....	....



SCHEDULE No. 9.—( *Continued* ).

MATHEMATICS AND NATURAL PHILOSOPHY, AND THEIR AP- PLICATIONS.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
4. Eaton .....	...	...	...	...	...	...	1
5. Greenleaf .....	9	4	5	5	4	7	4
6. Loomis .....	5	2	3	3	3	4	6
7. Olney .....	...	...	...	...	...	...	1
8. Perkins .....	1	...	...	...	...	...	....
9. Ray .....	1	1	1	1	1	2	1
10. Robinson .....	152	156	167	154	154	156	156
11. Stoddard and Henkle	4	3	3	2	3	1	....
12. Tower .....	1	...	...	...	...	...	....
13. Thomson .....	1	2	1	...	...	...	....
<i>Astronomy.</i>							
1. Brocklesby .....	14	11	16	9	6	5	6
2. Burritt .....	49	51	48	24	21	12	8
3. Cambridge course...	...	...	...	1	3	2	1
4. Comstock .....	1	1	...	...	...	...	....
5. Draper .....	...	1	1	...	...	...	....
6. Eaton .....	1	1	1	1	...	...	....
7. Kiddle .....	1	...	...	8	8	10	18
8. Lardner .....	1	...	...	...	...	...	....
9. Lectures .....	2	...	...	...	2	1	1
10. Lockyer .....	...	...	...	...	...	7	8
11. Loomis .....	3	3	4	9	5	6	18
12. Mattison .....	53	44	44	27	17	15	9
13. McIntyre .....	...	...	...	...	1	...	....
14. Mitchell .....	2	...	2	2	2	1	2
15. Norton .....	...	...	...	...	1	...	....
16. Olmsted (and Snell's Olmsted) .....	11	12	10	6	5	4	3
17. Parker .....	1	1	...	1	...	...	....
18. Ray .....	...	...	...	...	...	2	....
19. Robinson .....	1	5	...	3	3	2	1
20. Rolfe and Gillett...	...	...	5	12	15	14	11
21. Smith .....	9	11	10	4	2	4	3
22. Steele .....	...	...	1	16	29	39	38
23. Whithall .....	1	...	...	1	...	...	....
<i>Calculus.</i>							
1. Church .....	1	1	1	...	...	...	1
2. Davies .....	3	6	3	1	1	3	3
3. Greenleaf .....	1	...	...	...	1	3	....
4. Loomis .....	6	3	5	4	4	5	6
5. Robinson .....	1	1	2	2	3	1	2
6. Smyth .....	1	...	...	...	...	...	....

## SCHEDULE No. 9—(Continued).

MATHEMATICS AND NATURAL PHILOSOPHY, AND THEIR AP- PLICATIONS.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
<i>Conic Sections.</i>							
1. Coffin .....	...	...	...	1	...	...	...
2. Davis .....	5	4	2	...	1	4	2
3. Greenleaf .....	1	...	...	...	...	...	...
4. Jackson .....	2	2	1	1	1	...	1
5. Loomis... ..	6	9	9	7	6	4	7
6. Robinson .....	2	2	2	3	4	5	9
<i>Engineering.</i>							
1. Davies .....	3	5	4	3	2	4	6
2. Exercises .....	...	...	1	...	1	1	1
3. Gillespie .....	6	5	6	4	5	2	3
4. Hencks .....	...	...	...	...	...	...	1
5. Jackson .....	...	...	...	1	...	...	...
6. Loomis .....	3	1	...	...	...	...	2
7. Lectures .....	...	1	...	...	...	...	...
8. Mahan .....	3	2	4	1	1	1	1
9. Robinson .....	1	1	...	1	1	8	1
<i>Geometry.</i>							
1. Brooks .....	...	...	...	...	...	1	1
2. Chauvenet .....	...	...	...	...	...	2	1
3. Davies .....	130	124	134	112	101	102	108
4. Euclid(Playfair's and Todhunter's) .....	2	3	2	1	4	8	4
5. Greenleaf .....	3	3	2	2	3	6	4
6. Hill .....	..	...	...	1	...	...	...
7. Law and Playfair....	...	...	...	1	...	...	...
8. Loomis .....	23	22	19	18	24	26	29
9. Oral .....	...	...	...	1	...	...	1
10. Perkins .....	...	...	...	...	...	1	...
11. Pierce .....	1	...	...	...	...	...	...
12. Robinson .....	27	35	41	37	43	48	46
<i>Geometry; analytical and descriptive.</i>							
1. Chambers .....	...	...	...	...	1	...	...
2. Church .....	1	2	1	...	1	2	2
3. Davies .....	31	38	28	16	21	22	17
4. Greenleaf .....	2	...	1	...	...	...	...
5. Lectures .....	...	...	...	...	1	...	1
6. Loomis .....	8	4	6	2	6	7	6

SCHEDULE No. 9 — (*Continued*).

MATHEMATICS AND NATURAL PHILOSOPHY, AND THEIR AP- PLICATIONS.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
7. Robinson .....	9	5	5	3	13	18	9
8. Warren .....	...	...	2	...	...	...	...
<i>Natural Philosophy.</i>							
1. Alison's Ganot .....	...	...	...	3	3	1	...
2. Cambridge Course ..	...	...	...	...	1	...	2
3. Comstock .....	3	1	2	1	...	...	...
4. Cooley .....	...	...	...	4	6	5	6
5. Draper .....	3	2	3	1	1	...	...
6. Gray .....	4	2	2	...	2	...	...
7. Hitchcock .....	...	...	...	...	...	...	1
8. Hooker .....	1	...	...	1	1	2	...
9. Johnston .....	2	1	...	...	...	...	...
10. Lectures .....	1	...	...	...	...	...	2
11. Loomis .....	1	...	...	...	...	...	...
12. Norton .....	...	1	...	...	...	...	...
13. Olmsted .....	3	3	2	3	2	3	1
14. Parker .....	41	34	30	16	17	7	13
15. Peck's Ganot .....	25	25	36	28	21	19	15
16. Peterson .....	...	1	...	...	...	...	...
17. Porter .....	...	1	...	...	...	1	...
18. Quackenbos .....	27	28	27	31	24	22	24
19. Rolfe and Gillett ..	...	...	3	11	15	20	15
20. Silliman .....	2	1	2	2	...	...	...
21. Sprague .....	...	1	1	...	...	...	...
22. Steele .....	...	...	...	3	18	31	43
23. Wells .....	103	93	106	80	62	64	61
24. Weisbach .....	...	...	...	...	1	1	...
25. Wilson .....	...	...	...	...	1	1	1
<i>Navigation.</i>							
1. Davies .....	10	11	10	9	5	4	8
2. Eaton .....	1	1	1	...	...	...	...
3. Greenleaf .....	1	...	...	...	...	...	...
4. Loomis .....	9	6	8	5	4	2	4
5. Robinson .....	8	...	5	8	7	12	10
<i>Perspective.</i>							
1. Bartholomew .....	...	...	...	...	1	1	4
2. Chapman .....	...	...	...	...	2	...	...
3. Church .....	...	1	1	...	...	1	...
4. Davies .....	4	4	4	2	4	...	3
5. Dupuis .....	1	...	...	...	...	...	...

## SCHEDULE No. 9 — (Continued).

MATHEMATICS AND NATURAL PHILOSOPHY, AND THEIR AP- PLICATIONS.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
6. Eaton .....	...	1	...	1	1	...	1
7. Gaskins (Mrs.) .....	1	...	...	...	...	...	...
8. Gillespie .....	1	...	...	...	...	...	...
9. Hertzberg .....	1	1	1	...	1	1	1
10. Krusi .....	1	1	1	1	1	1	1
11. Longwell .....	...	...	...	1	...	...	...
12. Meinrifies .....	...	...	...	...	...	1	1
13. Oral lessons .....	1	4	3	4	3	4	2
14. Schuster .....	1	...	...	...	...	...	...
15. Smith .....	1	1	1	...	...	...	...
16. Warren .....	...	...	1	...	...	...	...
17. Whittock & Varley,	1	...	...	...	...	...	...
<i>Surveying and Leveling.</i>							
1. Bradbury .....	...	...	1	...	...	...	...
2. Davies .....	36	36	33	31	31	26	27
3. Flint .....	1	1	1	...	...	...	...
4. Gibson .....	...	...	...	...	...	...	...
5. Gillespie .....	20	19	17	12	112	13	12
6. Greenleaf .....	1	...	...	...	...	...	...
7. Gummere .....	2	2	1	1	1	2	1
8. Hencks .....	1	...	...	...	...	...	...
9. Lectures .....	...	1	1	...	...	...	1
10. Loomis .....	9	6	9	6	6	6	8
11. Robinson .....	15	11	12	19	18	25	24
12. Root .....	...	...	...	1	...	...	...
13. Smith .....	1	1	...	...	...	...	...
<i>Technology.</i>							
1. Bigelow .....	1	...	1	...	2	1	1
2. Davies .....	1	1	1	...	1	...	...
3. Lectures .....	...	...	...	...	1	1	1
4. Robinson .....	1	...	...	...	...	...	...
5. Youmans .....	1	...	1	...	...	...	...
<i>Trigonometry.</i>							
1. Bradbury .....	1	1	1	...	...	...	...
2. Chambers .....	...	...	...	...	1	...	...
3. Davies .....	70	74	78	72	56	57	60
4. Day .....	1	1	...	1	...	...	...
5. Gillespie .....	1	1	1	1	...	...	1
6. Greenleaf .....	3	2	2	2	1	2	2
7. Gummere .....	1	1	1	1	1	2	1

SCHEDULE No. 9 — (*Continued*).

MATHEMATICS AND NATURAL PHILOSOPHY, AND THEIR AP- PLICATIONS.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
8. Jackson .....	...	1	...	...	...	...	....
9. Loomis.....	11	9	10	8	8	9	10
10. Olmsted.....	...	...	...	...	...	1	....
11. Perkins .....	1	1	...	...	...	...	....
12. Robinson.....	21	21	32	28	33	34	33
ANCIENT LANGUAGES.							
<i>Greek Grammar.</i>							
1. Anthon .....	3	...	...	...	...	...	....
2. Arnold .....	...	...	1	...	...	1	....
3. Bullions.....	42	28	30	32	21	14	17
4. Brooks .....	...	...	1	...	...	...	....
5. Crosby .....	48	46	37	29	28	29	34
6. Goodrich .....	1	...	1	...	...	...	2
7. Goodwin.....	...	...	...	...	...	...	12
8. Hadley .....	53	68	73	70	75	78	82
9. Hanson .....	...	...	...	...	...	...	1
10. Harkness.....	8	10	15	18	17	16	10
11. Kendrick.....	3	5	6	10	6	3	3
12. Kühner .....	4	4	2	6	3	1	1
13. McClintock & Crook,	3	2	...	2	1	...	1
14. Morris .....	...	...	...	...	3	1	....
15. Ollendorff .....	...	...	...	1	1	...	....
16. Ruddeman .....	...	...	...	...	1	...	....
17. Sophocles.....	1	...	...	...	...	...	....
18. Waddell .....	...	...	...	...	2	1	1
<i>Latin Grammar.</i>							
1. Allen .....	...	...	...	...	4	2	3
2. Andrews & Stoddard	153	127	123	96	78	69	75
3. Arnold .....	5	3	1	...	...	1	5
4. Bullions.....	24	11	16	19	17	18	11
5. Fisher .....	...	...	...	...	1	...	....
6. Hadley.....	...	...	...	...	1	...	....
7. Harkness .....	29	77	77	77	92	96	107
8. Harrison .....	1	...	...	...	...	...	....
9. McClintock & Crook,	5	3	...	3	2	...	2
10. Morris .....	...	...	1	5	8	3	6
11. Smith.....	1	...	...	2	2	...	1
12. Weld .....	1	...	...	...	...	...	....

SCHEDULE No. 9 ( *Continued* ).

ANCIENT LANGUAGES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
<i>Grecian Antiquities.</i>							
1. Allen .....	1	1	1	2	2	2	2
2. Anthon .....	21	15	18	17	20	18	13
3. Arnold .....	...	1	1	3	1	1	1
4. Baird .....	1	...	1	...	1	...	1
5. Bojesen .....	5	4	3	4	2	3	1
6. Eschenberg .....	5	2	2	3	2	2	3
7. Fiske .....	...	1	...	1	1	...	...
8. Lectures .....	1	1	2	1	...	...	...
9. Lord .....	...	...	...	...	...	1	1
10. Owen .....	...	3	1	2	3	...	...
11. Potter .....	...	...	1	...	...	...	...
12. Putz and Arnold ...	2	1	1	1	1	...	...
13. Smith .....	5	4	3	6	9	7	13
<i>Roman Antiquities.</i>							
1. Adams .....	2	2	3	5	2	2	1
2. Allen .....	3	1	2	2	2	2	2
3. Andrews .....	...	1	...	1	3	3	3
4. Anthon .....	32	32	34	20	25	23	20
5. Arnold .....	...	...	2	1	1	1	...
6. Baird .....	2	1	1	1	3	2	1
7. Bojesen .....	4	6	5	2	3	4	1
8. Brooks .....	...	...	...	...	...	2	2
9. Dillaway .....	1	...	...	...	1	...	...
10. Eschenberg .....	6	2	3	2	2	3	2
11. Fiske .....	...	2	1	...	1	2	1
12. Frieze .....	...	...	...	1	1	...	...
13. Hanson .....	...	...	...	...	...	...	1
14. Johnson .....	...	1	...	...	1	...	...
15. Lectures .....	2	1	2	1	2	1	...
16. Lempriere .....	...	...	1	...	1	1	...
17. Lord .....	...	...	...	...	...	...	1
18. Morris .....	...	...	...	...	1	1	...
19. Putz and Arnold ...	1	1	1	1	1	...	...
20. Salkeld .....	1	1	1	1	...	1	...
21. Smith .....	11	10	6	5	7	10	15
<i>Mythology.</i>							
1. Adams .....	...	...	...	...	1	...	...
2. Allen .....	2	1	2	1	2	1	2
3. Andrews .....	5	5	3	2	1	6	4
4. Anthon .....	26	22	17	19	13	17	21

SCHEDULE No. 9 — (*Continued*).

ANCIENT LANGUAGES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
5. Arnold .....	...	...	1	1	...	...	...
6. Baird .....	1	...	1	2	3	1	3
7. Bulfinch .....	3	4	3	6	7	5	4
8. Cox .....	...	...	...	...	...	...	1
9. Dillaway .....	1	...	...	...	1	...	...
10. Dwight .....	9	5	5	5	4	6	3
11. Eschenberg .....	4	1	2	1	1	4	2
12. Fiske .....	...	1	...	...	1	2	...
13. Harkness .....	1	1	...	...	...	2	4
14. Hart .....	1	1	1	1	...	...	...
15. Keightley .....	2	3	3	3	5	4	2
16. Kerney .....	...	...	...	...	1	...	...
17. Lempriere .....	1	...	1	...	1	1	...
18. Lectures .....	2	...	3	1	1	1	1
19. Lord .....	...	...	...	...	...	...	1
20. Morris .....	...	...	...	...	1	1	...
21. Putz and Arnold ...	1	1	1	1	1	...	...
22. Salkeld .....	...	1	1	1	...	...	...
23. Smith .....	6	6	3	1	2	2	5
24. Tooke .....	1	1	...	1	...	...	2
MODERN LANGUAGES.							
<i>French.</i>							
1. Bardt .....	...	...	...	...	...	...	1
2. Chouquet .....	1	...	...	...	...	...	...
3. Constellano & Ouden	...	...	1	...	...	...	...
4. De Fivas .....	...	1	1	1	1	2	2
5. Fasquelle .....	153	148	150	121	108	102	97
6. Gengembre .....	...	1	1	...	...	...	...
7. Girault .....	...	...	1	...	...	...	...
8. Guyot .....	...	1	...	...	...	...	...
9. Keetel .....	2	...	...	1	6	6	7
10. Knapp .....	4	5	3	4	3	3	1
11. Ledru .....	...	1	1	...	...	...	1
12. Levizac .....	2	1	...	...	1	1	...
13. Magill .....	...	3	10	16	21	19	21
14. Manesca .....	3	2	3	...	...	1	...
15. Noel and Chapsal ...	4	2	6	6	4	2	4
16. Ollendorff .....	2	1	2	...	1	1	2
17. Otto .....	2	4	5	9	5	9	10
18. Ouden .....	...	...	1	...	...	...	...
19. Pinckney .....	...	...	1	...	...	...	...
20. Pinney and Arnoult,	3	4	4	2	2	2	4

## SCHEDULE No. 9 — (Continued).

MODERN LANGUAGES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
21. Potevin .....	1	1	1	1	2	...	1
22. Pujol and Van Norman .....	8	8	5	8	7	5	8
23. Robertson .....	4	4	3	3	3	1	2
<i>German.</i>							
1. Adler .....	4	4	3	2	4	1	2
2. Ahn .....	15	11	10	11	14	16	11
3. Campbell .....	...	...	...	...	...	1	3
4. Comfort .....	...	...	...	...	5	6	16
5. Comstock .....	...	...	...	1	...	...	...
6. Douai .....	2	1	1	1	...	...	...
7. Eichorn .....	1	...	...	...	...	...	...
8. Evans .....	...	...	...	...	...	...	1
9. Glaubenskleer .....	1	1	1	...	...	...	...
10. Keetel .....	...	...	...	...	...	...	4
11. Ochschrager .....	...	...	...	...	1	...	...
12. Ollendorff .....	5	4	4	1	3	...	...
13. Otto .....	3	6	6	7	11	11	14
14. Peissner .....	7	6	8	4	4	5	1
15. Petermann .....	...	1	1	...	...	...	...
16. Prendergast .....	...	...	1	...	1	1	...
17. Soden .....	...	1	1	2	1	1	...
18. Whitney .....	...	...	...	...	...	1	4
19. Woodbury .....	81	76	74	64	67	58	53
20. Worman .....	...	...	3	13	21	18	14
<i>Italian.</i>							
1. Cuore .....	...	...	1	...	...	...	...
2. Fontana .....	1	1	2	2	2	1	1
3. Foresti .....	1	1	1	...	1	...	...
4. Greene .....	...	...	...	...	1	...	...
5. Woodbury .....	...	1	...	...	...	...	...
<i>Spanish.</i>							
1. Ahn .....	...	...	...	...	2	1	...
2. De Farnos .....	...	...	...	...	1	2	1
3. Ollendorff .....	2	2	2	3	5	4	3
4. Pinney and Barselo, .....	1	2	...	1	...	...	...
5. Robertson .....	...	2	...	...	1	2	1
6. Velasquez .....	...	...	1	1	1	...	...
7. Vingut .....	1	2	1	1	1	1	1
8. Woodbury .....	...	2	...	...	...	...	...



## SCHEDULE No. 9—(Continued).

NATURAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
<i>Anatomy, Physiology and Hygiene.</i>							
1. Colton .....	...	...	...	...	...	1	....
2. Comings .....	3	1	2	2	2	2	1
3. Comstock .....	1	...	...	...	...	...	....
4. Cutter .....	93	94	80	65	43	54	55
5. Dalton .....	...	...	...	8	17	22	26
6. Draper .....	1	1	1	1	1	...	....
7. Gallup .....	...	...	...	1	1	1	1
8. Hitchcock .....	12	13	18	19	18	18	16
9. Hooker .....	10	6	12	9	8	6	6
10. Huntington .....	...	...	...	...	...	...	1
11. Hutchins (or Hutch- inson) .....	...	...	...	...	...	7	18
12. Huxley & Youmans, .....	...	...	3	3	6	6	2
13. Jarvis .....	1	4	9	13	16	15	15
14. Lambert .....	21	19	17	5	4	3	5
15. Lectures .....	6	3	5	8	10	5	5
16. Loomis .....	2	...	...	1	1	1	1
17. Quackenbos .....	1	...	...	1	...	...	....
18. Steele .....	...	...	...	...	...	1	2
<i>Botany.</i>							
1. Gray .....	54	59	53	71	62	56	64
2. Lectures .....	1	...	1	1	1	2	1
3. Lincoln (Mrs.) .....	3	2	1	...	...	2	1
4. Wood .....	88	69	80	60	59	61	57
5. Youmans (Miss) .....	...	...	...	...	1	6	6
<i>Chemistry.</i>							
1. Barker .....	...	...	...	...	...	1	7
2. Bowman .....	2	1	...	1	...	3	....
3. Cambridge Course .....	...	...	...	2	1	...	2
4. Comstock .....	1	...	...	...	...	...	1
5. Cooke .....	1	1	1	...	...	1	1
6. Cooley .....	...	...	...	1	5	3	6
7. Draper .....	4	3	1	1	1	...	1
8. Elderhorst .....	...	...	...	...	...	1	1
9. Elliott and Stover .....	...	...	...	...	...	1	3
10. Fownes .....	1	2	1	...	...	2	1
11. Gray .....	3	1	...	1	...	1	....
12. Hitchcock .....	...	1	1	...	1	...	....
13. Hooker .....	...	1	2	3	2	5	5

## SCHEDULE No. 9 — (Continued).

NATURAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
14. Johnston .....	4	2	2	1	...	...	...
15. Lectures .....	2	1	2	...	...	3	5
16. Norton .....	...	...	...	...	...	...	1
17. Porter .....	19	21	24	19	15	14	11
18. Rolfe and Gillett ...	...	...	5	10	11	12	11
19. Roscoe .....	...	...	...	...	...	2	4
20. Silliman .....	5	5	4	2	...	...	1
21. Steele .....	...	1	8	23	41	38	42
22. Stockhardt .....	2	2	1	1	1	...	...
23. Turner.....	2	...	...	1	...	...	...
24. Wells .....	45	59	52	36	25	32	31
25. Wilson.....	...	...	1	...	...	...	1
26. Youmans.....	26	32	30	15	22	15	14
<i>Geology.</i>							
1. Comstock . . . . .	...	1	...	...	...	...	...
2. Dana .....	15	23	24	32	26	24	20
3. Davies .....	...	...	...	1	...	...	...
4. Eaton .....	...	...	...	1	1	...	...
5. Emmons .....	1	...	...	...	...	...	...
6. Gray and Adams ...	6	1	3	1	...	...	...
7. Hitchcock .....	25	26	16	21	20	14	14
8. Hooker .....	...	...	2	3	2	5	6
9. Lectures .....	2	1	3	...	...	4	4
10. Lee.....	...	1	...	...	...	...	...
11. Littell .....	1	...	...	...	...	...	...
12. Loomis.....	1	...	1	1	...	...	1
13. Lyell .....	1	...	...	...	...	...	1
14. Miller .....	...	1	1	...	...	...	...
15. Nicholson .....	...	...	...	...	...	...	1
16. Page .....	1	1	1	...	...	...	...
17. Ruschenberger .....	1	...	...	...	...	...	...
18. Steele .....	...	...	...	...	1	13	16
19. St. John .....	...	...	2	...	...	...	...
20. Tenney .....	5	4	5	2	3	3	5
21. Warren .....	1	2	1	...	...	...	...
22. Wells .....	19	15	15	11	9	12	6
<i>Meteorology.</i>							
1. Brocklesby .....	3	1	3	2	3	1	2
2. Dana .....	1	1	...	...	1	...	1
3. Fitch .....	...	...	...	...	1	1	...
4. Lectures .....	1	1	...	...	3	2	...

## SCHEDULE No. 9 — (Continued).

NATURAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
5. Loomis .....	1	...	1	...	1	2	3
6. Norton .....	1	1	...	...	...	...	1
7. Peck's Ganot .....	...	...	1	...	...	1	...
8. Porter .....	1	1	...	...	...	...	1
9. Steele .....	...	...	...	1	1	2	1
10. Warren .....	4	4	1	2	...	1	2
11. Wells .....	6	7	4	2	1	2	2
<i>Mineralogy.</i>							
1. Dana .....	12	7	10	9	10	7	13
2. Elderhorst .....	1	1	1	...	...	...	...
3. Hitchcock .....	...	1	1	1	...	...	...
4. Hooker .....	...	1	...	1	3	5	3
5. Lectures .....	1	2	...	1	2	3	...
6. Lyell .....	1	...	...	...	...	...	...
7. Steele .....	...	...	...	1	...	2	3
8. Warren .....	1	...	1	...	...	...	...
9. Wells .....	2	...	...	...	...	...	...
<i>Natural History.</i>							
1. Ackerman .....	1	...	...	...	...	...	...
2. Agassiz and Gould ..	...	...	...	...	...	1	2
3. Anderson .....	...	...	...	...	...	...	1
4. Chambers .....	...	...	...	2	1	1	...
5. Goldsmith .....	1	...	...	...	...	...	...
6. Hooker .....	3	6	7	7	14	16	16
7. Lectures .....	4	3	2	...	5	4	2
8. Redfield .....	2	3	2	2	...	...	...
9. Smellie .....	8	4	4	2	...	4	...
10. State Reports .....	1	...	...	...	...	...	...
11. Tenney .....	1	3	3	4	8	5	6
12. Ware's Smellie .....	2	2	2	...	3	...	3
13. Warren .....	1	...	...	...	...	...	...
14. Willson .....	1	1	1	3	...	...	...
15. Wood .....	1	1	1	...	...	...	...
<i>Zoölogy..</i>							
1. Agassiz and Gould ..	9	7	5	2	5	4	6
2. Chambers .....	...	...	2	2	1	1	1
3. Dana .....	1	1	...	...	...	...	...
4. Edwards .....	...	1	1	...	...	1	...
5. Hitchcock .....	1	1	1	1	1	1	1
6. Hooker .....	...	1	3	3	3	8	7

## SCHEDULE No. 9 — (Continued).

NATURAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
7. Lectures .....	4	...	4	...	2	3	3
8. Nicholson .....	...	...	...	...	...	...	1
9. Redfield .....	...	3	1	1	...	...	...
10. Tenney .....	...	3	2	1	5	4	3
11. Ware's Snellie .....	1	...	...	...	1	1	1
12. Warren .....	1	...	...	...	...	...	...
13. Willson .....	...	...	2	1	...	...	...
MORAL, INTELLECTUAL AND POLITICAL SCIENCES.							
<i>Criticism (Elements).</i>							
1. Bascom .....	...	1	1	1	...	...	...
2. Blair .....	...	1	...	...	...	...	...
3. Boyd .....	...	...	...	...	1	2	1
4. Craik .....	...	...	...	1	...	...	...
5. Kames .....	43	46	36	28	30	23	28
6. Lectures .....	3	2	2	4	2	3	3
7. Quackenbos .....	2	...	...	1	...	1	1
8. Shaw .....	...	...	...	1	...	...	...
9. Spaulding .....	...	1	1	...	...	...	...
10. Trench .....	...	...	...	...	...	1	1
<i>Christianity (Evidences).</i>							
1. Alexander .....	8	6	7	4	5	4	2
2. Bushnell .....	1	1	...	...	...	...	...
3. Butler .....	7	4	4	6	2	4	5
4. Dodge .....	...	...	...	...	1	1	...
5. Hooker .....	...	...	...	...	...	...	1
6. Hopkins .....	10	7	8	8	10	10	10
7. Lectures .....	1	1	3	5	2	3	5
8. McIlvaine .....	...	...	...	...	1	...	...
9. Paley .....	20	16	16	14	17	8	11
10. Potter .....	...	...	...	...	...	...	1
11. Wayland .....	...	...	2	...	...	...	...
12. Whately .....	...	...	...	...	1	...	...
<i>History (General).</i>							
1. Abbott .....	...	...	...	...	...	...	1
2. Anderson .....	...	...	2	7	13	29	35
3. Berard .....	1	1	1	1	2	...	...
4. Bloss .....	1	1	3	3	2	3	2
5. Dew .....	1	1	1	...	...	...	1

## SCHEDULE No. 9 — (Continued).

MORAL, INTELLECTUAL AND POLITICAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
6. Dickens .....	...	1	1	...	...	...	...
7. Edwards (Miss) ....	1	...	...	...	...	...	...
8. Foster .....	...	...	1	...	...	...	...
9. Fredet .....	...	...	...	...	1	...	...
10. Goodrich .....	4	4	5	2	4	4	4
11. Harper .....	2	1	1	...	...	...	...
12. Hume .....	1	...	...	...	...	...	1
13. Kerney .....	...	...	...	...	1	...	...
14. Labberton .....	...	...	...	...	...	1	1
15. Lectures .....	...	1	...	...	...	2	...
16. Liddell .....	...	1	2	1	...	...	2
17. Lord .....	1	...	1	3	2	6	6
18. Markham .....	...	2	1	3	4	4	3
19. Miller .....	1	...	...	...	...	...	1
20. Motley .....	...	1	...	...	...	...	...
21. Oral .....	...	...	1	1	...	...	...
22. Parke .....	...	...	1	1	...	...	...
23. Putz and Arnold ...	...	...	1	1	...	...	...
24. Quackenbos .....	...	1	1	1	...	1	...
25. Reed .....	...	1	1	...	...	...	...
26. Ricord .....	...	...	...	...	...	...	1
27. Robbins .....	12	14	1	2	3	3	2
28. Sewell .....	1	1	7	1	1	...	1
29. Smith .....	...	1	2	2	2	4	2
30. Taylor .....	1	1	1	...	...	...	...
31. Thalheimer .....	...	...	...	...	...	...	2
32. Tytler .....	1	1	2	1	1	...	...
33. Weber .....	7	4	3	3	2	...	1
34. Wheatley .....	...	...	...	1	1	...	...
35. Whelpley .....	1	1	1	...	...	...	...
36. White .....	1	...	1	...	...	...	...
37. Willard .....	13	12	10	11	4	7	5
38. Willson .....	48	44	39	41	39	28	30
39. Worcester .....	7	10	10	4	5	6	5
40. Yonge .....	...	...	...	...	...	1	2
<i>History of the United States.</i>							
1. Anderson .....	2	2	3	14	25	39	42
2. Bancroft .....	1	...	...	...	1	...	...
3. Barnes .....	...	...	...	...	...	1	11
4. Berard .....	3	7	7	5	7	8	3
5. Bloss .....	1	...	...	...	...	...	...

## SCHEDULE 'No. 9 — (Continued).

MORAL, INTELLECTUAL AND POLITICAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
6. Campbell.....	...	...	...	...	...	...	1
7. Colton .....	1	...	...	...	...	...	...
8. Goodrich (Seavey)...	27	21	22	20	16	18	16
9. Guernsey.....	...	1	1	...	...	...	...
10. Hale.....	1	...	...	...	1	...	...
11. Harper.....	1	1	1	...	...	1	1
12. Lossing .....	31	26	28	17	21	20	18
13. Martindale .....	...	...	...	1	2	1	1
14. Monteith .....	1	1	1	...	...	...	...
15. Peabody .....	1	...	...	...	...	...	...
16. Quackenbos .....	27	36	34	32	31	22	21
17. Reed .....	1	...	...	...	...	...	...
18. Scott's Manual.....	...	...	...	1	1	2	2
19. Seavey (see Good- rich).							
20. Swinton.....	...	...	...	...	...	...	7
21. Weber .....	...	...	1	...	...	...	...
22. Willard .....	11	6	7	5	9	9	7
23. Willson .....	54	48	45	36	26	23	19
24. Worcester .....	1	3	1	1	1	...	1
<i>History of Literature.</i>							
1. Botta .....	...	...	...	...	1	2	1
2. Chambers .....	...	...	...	...	1	...	...
3. Cleveland .....	18	17	14	14	17	15	14
4. Collier .....	...	...	...	1	2	5	7
5. Collins.....	...	...	1	1	1	1	...
6. Gilman .....	...	...	...	...	...	...	2
7. Hart.....	...	...	...	...	...	...	2
8. Hazlitt.....	...	...	1	...	...	...	...
9. Hunt .....	...	...	...	...	...	1	...
10. Lectures .....	...	1	2	1	1	4	...
11. Lord.....	1	1	1	...	1	1	1
12. Reed .....	...	1	1	1	...	...	...
13. Schlegel.....	1	1	2	1	1	...	1
14. Shaw .....	9	11	16	15	18	35	22
15. Sherman .....	...	...	1	...	...	...	...
16. Smith.....	...	...	...	...	...	...	2
17. Spaulding .....	3	4	2	3	3	2	...
18. Swallow .....	...	...	...	...	...	...	1
19. Tuckerman .....	...	...	...	...	...	...	1

## SCHEDULE No. 9 — (Continued).

MORAL, INTELLECTUAL AND POLITICAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
<i>Natural Theology.</i>							
1. Butler .....	3	2	2	3	3	3	5
2. Chadbourne .....	...	...	...	1	3	6	4
3. Hopkins .....	...	...	...	...	...	1	...
4. Lectures .....	1	2	4	2	1	1	2
5. Paley .....	34	26	28	21	20	10	12
6. Stewart .....	1	1	1	1	1	1	1
7. True .....	...	...	...	...	...	1	1
<i>Philosophy (Intellectual).</i>							
1. Abercrombie .....	8	7	8	6	6	4	4
2. Alden .....	...	2	3	3	1	1	...
3. Alexander .....	...	...	...	...	...	1	1
4. Bain .....	...	...	...	...	...	1	1
5. Boyd .....	1	...	...	...	...	...	...
6. Champlin .....	3	3	2	2	2	2	2
7. Combe .....	1	1	1	1	1	1	1
8. Cruttenden .....	2	...	...	...	...	...	...
9. Hamilton .....	6	6	4	3	3	2	...
10. Haven .....	18	20	25	23	24	21	20
11. Hickok .....	9	7	8	5	6	8	9
12. Lectures .....	1	1	1	1	...	...	3
13. Mahan .....	1	1	2	1	...	...	...
14. Paley .....	...	...	...	...	...	1	1
15. Parker .....	...	...	...	...	...	1	...
16. Porter .....	...	...	...	...	...	...	2
17. Quackenbos .....	1	1	1	...	...	...	...
18. Stewart .....	3	...	...	...	...	...	...
19. Thomson .....	1	...	1	...	...	...	1
20. Upham .....	16	15	13	13	11	12	15
21. Watts .....	1	1	1	1	...	...	...
22. Wayland .....	16	13	8	5	13	9	7
23. Wells .....	1	...	...	...	...	...	...
24. Winslow .....	...	...	...	1	1	1	1
<i>Law and Government.</i>							
1. Alden .....	...	1	7	19	17	12	8
2. Constitution (U. S.),	1	...	...	...	...	...	...
3. Howe .....	...	...	...	...	...	2	1
4. Jefferson .....	...	...	...	...	...	...	1
5. Lectures .....	2	4	4	3	...	4	3
6. Mansfield .....	...	...	1	...	...	...	...
7. Martin .....	...	...	...	...	...	1	...

## SCHEDULE No. 9 — (Continued).

MORAL, INTELLECTUAL AND POLITICAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
8. Sheppard .....	1	2	1	...	...	1	....
9. Shurtleff .....	1	...	...	...	...	...	....
10. Story .....	1	1	2	...	...	...	1
11. Tilden .....	...	...	1	...	...	...	....
12. Townsend .....	...	...	...	12	16	24	33
13. Woolsey .....	1	...	1	1	1	...	....
14. Woodbury .....	...	1	...	...	...	...	....
15. Young .....	51	55	45	34	20	24	17
<i>Logic.</i>							
1. Atwater .....	...	1	1	...	...	...	1
2. Boyd .....	...	1	1	...	...	...	....
3. Coppee .....	6	7	5	3	5	5	5
4. Day .....	...	...	...	1	3	1	3
5. Fowler .....	1	...	...	...	...	...	....
6. Hedge .....	4	2	...	1	1	2	1
7. Lectures .....	1	...	...	...	...	...	....
8. Mahan .....	...	1	1	...	2	2	2
9. McGregor .....	1	...	...	...	...	...	1
10. Quackenbos .....	1	1	...	1	1	1	1
11. Schnyler .....	...	...	...	...	1	1	1
12. Tappan .....	1	1	1	1	1	4	2
13. Thomson .....	4	3	2	...	...	2	3
14. True .....	9	7	7	7	7	4	8
15. Whately .....	16	10	16	11	11	11	8
16. Young .....	...	...	...	...	1	1	....
<i>Philosophy (Moral).</i>							
1. Abercrombie .....	1	2	3	2	1	2	1
2. Alden .....	...	2	1	...	...	...	1
3. Alexander .....	6	6	6	7	3	6	3
4. Bain .....	...	...	...	...	...	1	1
5. Bible .....	1	...	...	...	...	...	1
6. Butler .....	2	1	1	...	...	...	1
7. Catechism .....	...	...	...	...	1	...	....
8. Combe .....	1	...	1	...	1	1	....
9. Dymond .....	1	1	1	1	1	1	....
10. Fairchild .....	...	...	...	...	1	1	1
11. Haven .....	4	3	3	5	5	6	8
12. Hickok .....	6	7	9	2	6	6	10
13. Hopkins .....	2	3	4	4	3	3	3
14. Lectures .....	2	1	1	2	...	1	2
15. Paley .....	...	...	1	...	...	...	....



## SCHEDULE No. 9 — (Continued).

MORAL, INTELLECTUAL AND POLITICAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
16. Quackenbos .....	1	...	...	...	...	...	....
17. Stewart .....	1	...	...	...	...	...	....
18. Upham .....	...	...	1	1	1	1	....
19. Wayland .....	43	40	37	30	32	25	25
20. Willson .....	...	...	...	...	1	...	....
<i>Political Economy.</i>							
1. Bowen .....	1	1	1	1	1	...	1
2. Greeley .....	...	...	...	1	1	...	1
3. Lectures .....	3	1	2	4	1	1	1
4. Perry .....	...	...	1	2	3	1	2
5. Say .....	1	1	1	...	...	...	....
6. Smith .....	2	1	...	...	...	...	1
7. Townsend .....	...	...	...	...	...	...	1
8. Walker .....	...	...	...	...	...	1	1
9. Wayland .....	23	17	24	14	12	15	8
10. Young .....	3	2	3	...	...	...	....
<i>Rhetoric.</i>							
1. Bain .....	...	...	...	...	1	1	....
2. Boyd .....	8	5	7	5	1	3	2
3. Blair .....	7	6	7	6	5	3	3
4. Cruttenden .....	1	...	...	...	...	...	....
5. Coppee .....	5	6	3	6	2	2	2
6. Dalton .....	...	...	...	...	...	...	1
7. Day .....	2	2	4	4	3	3	2
8. Hart .....	...	...	...	...	...	15	17
9. Haven .....	...	...	...	1	13	11	10
10. Holbrook .....	1	11	...	...	...	...	....
11. Jamieson .....	1	...	...	...	...	1	....
12. Kerl .....	...	...	...	...	1	8	12
13. Lectures .....	1	...	...	2	...	1	2
14. Newman .....	6	2	3	2	2	2	....
15. Parker .....	2	...	...	...	...	...	....
16. Quackenbos .....	113	127	132	116	104	95	97
17. Whately .....	4	2	2	2	...	1	1
<i>Teaching, Principles of.</i>							
1. Abbott .....	...	...	1	...	2	...	....
2. Barnard .....	1	1	...	1	...	...	....
3. Bates .....	...	...	1	...	...	...	....
4. Boyd .....	...	...	...	1	1	...	....
5. Hartt .....	...	...	...	1	1	1	1

SCHEDULE No. 9 — (*Continued*).

MORAL, INTELLECTUAL AND POLITICAL SCIENCES.	NUMBER OF ACADEMIES.						
	1865-6.	1866-7.	1867-8.	1868-9.	1869-70.	1870-1.	1871-2.
6. Holbrook .....	11	11	7	7	8	5	9
7. Jewell .....	1	1	...	2	1	1	1
8. Lectures .....	10	7	7	9	8	9	10
9. Northend .....	8	1	4	2	4	2	1
10. Ogden .....	1	...	...	...	...	...	...
11. Page .....	74	65	64	56	55	55	56
12. Pestalozzi .....	...	...	...	...	...	1	1
13. Wickersham .....	4	8	8	5	3	3	2
<i>Domestic Economy.</i>							
1. Beecher .....	...	...	...	...	...	1	2
2. Practical Lectures ..	...	...	...	1	4	2	...
3. Stowe .....	...	...	...	...	...	...	1
4. Youmans .....	...	...	...	1	1	...	...

## ACADEMIES.

## SCHEDULE No. 10.

*Exhibiting the condition of Teachers' Classes during the academic year 1871-2.*

COUNTIES.	NAMES OF ACADEMIES.	NUMBER OF PUPILS INSTRUCTED FREE OF CHARGE			No. known to have received comm'n' certifi- cates.	No. known to have been en- gaged in teach- ing.	Amount appor- tioned by Re- sents, January, 1872.
		Male.	Female.	Total.			
Allegany .....	Alfred University (Acad. Department),	8	14	22	17	17	\$160 00
Broome .....	Friendship Academy .....	6	14	20	17	14	120 00
	Deposit Academy .....	1	5	6	3	3	60 00
	Whitney's Point Union School .....	12	8	20	15	15	200 00
Cattaraugus .....	Windsor Union School and Academy ..	5	15	20	13	13	200 00
	Chamberlain Institute .....	11	9	20	20	20	182 00
	Ten Brock Free Academy .....	11	11	22	22	19	200 00
Cayuga .....	Auburn Academic High School .....	5	15	20	5	5	200 00
	Port Byron Free School and Academy,	3	8	11	11	1	110 00
Chautauqua .....	Forestville Free Academy .....	10	11	21	21	19	200 00
	Jamestown Union School and Col. Inst.,	9	11	20	12	11	200 00
	Westfield Union School and Academy ..	1	16	17	16	14	170 00
Chemung .....	Elmira Free Academy .....	2	3	5	4	4	*50 00
Chenango .....	Afton Union School and Academy .....	12	18	30	17	10	200 00
	New Berlin Academy .....	12	9	21	19	15	200 00
	Norwich Academy .....	7	13	20	11	11	200 00
	Oxford Academy .....	6	14	20	16	16	200 00
Columbia .....	Spencertown Academy .....	7	8	15	9	3	150 00
Cortland .....	Cincinnatus Academy .....	8	12	20	10	6	200 00
	Cortland Academy .....	0	11	20	13	10	200 00

Delaware	Delaware Academy	11	9	20	Not	16	13	200 00
	Delaware Literary Institute	13	7	20	Not	13	8	200 00
Erie	Aurora Academy	3	17	20	Not	11	14	200 00
	Clarence Classical Union School	4	17	21	Not	11	11	200 00
	Griffith Institute	4	16	20	Not	20	14	200 00
Essex	Elizabethtown Union School	7	4	11	Yes	11	8	110 00
	Keeseville Union School	5	12	17	Yes	13	13	170 00
Franklin	Fort Covington Academy	7	13	20	Not	11	8	200 00
Genesee	Rural Seminary	9	11	20	Not	5	3	200 00
Herkimer	Fairfield Academy	13	1	14	Yes	13	12	140 00
	West Winfield Academy	5	15	20	Not	16	13	200 00
Jefferson	Black River Conference Seminary	7	13	20	Not	14	10	200 00
	Hungerford Collegiate Institute	8	12	20	Yes	15	15	200 00
	Union Academy at Belleville	6	14	20	Not	13	13	190 00
	Watertown High School	7	13	20	Yes	7	2	200 00
Lewis	Lowville Academy	...	12	12	Not	9	6	119 00
	Martin Institute	4	17	21	Not	15	12	200 00
Livingston	Genesee Wesleyan Seminary	4	6	10	Not	4	4	90 00
Madison	Central N. Y. Conference Seminary	9	5	14	Not	11	8	90 00
Monroe	Parma Institute	10	8	18	Not	...	...	180 00
Niagara	Lockport Union School	5	14	19	...	...	12	190 00
	Wilson Union School	10	10	20	Yes	13	9	200 00
Onondaga	Munro Collegiate Institute	9	11	20	Yes	10	5	200 00
	Onondaga Academy	9	11	20	Yes	6	4	200 00
	ol my	...	20	20	Yes	10	5	200 00
Ontario	my	16	...	16	Yes	14	4	101 50
	Geneva Classical and Union School	2	17	19	Yes	17	10	190 00
	Naples Academy	3	12	15	Not	12	6	150 00

\* Apportioned in June, 1872.

## ACADEMIES.

SCHEDULE No. 10 — (Continued).

COUNTIES.	NAMES OF ACADEMIES.	NUMBER OF PUPILS INSTRUCTED FREE OF CHARGE.			Class visited by school commis- sioner.	No. known to have received commen- dations.	No. known to have been en- gaged in teach- ing.	Amount ap- portioned by Re- solute January, 1878.
		Male.	Female.	Total.				
Orleans	Albion Academy	4	16	20	Not .	..	10	\$200 00
	Holley Union School	5	15	20	Not .	16	7	200 00
	Medina Free Academy	6	14	20	Not .	7	7	160 00
	Yates Academy	13	7	20	Not .	18	5	192 00
Oswego	Falley Seminary	6	1	7	Not .	7	5	70 00
	Mexico Academy	11	7	18	Not .	9	9	166 00
	Pulaski Academy	7	13	20	Yes .	20	18	200 00
	Gilbertsville Academy	4	14	18	Yes .	10	7	180 00
Otsego	Nassau Academy	...	5	5	Not .	3	3	50 00
	Troy Female Seminary	...	4	4	Not .	1	...	40 00
	Canton Union School	13	7	20	Yes .	19	19	200 00
	Gouverneur Wesleyan Seminary	5	15	20	Not .	15	15	191 00
Saratoga	Lawrenceville Academy	6	14	20	Yes .	2	2	200 00
	Halfmoon Academy	10	10	20	Not .	...	...	200 00
	Mechanicville Academy	2	10	12	Not .	6	7	120 00
	New York Conference Seminary	7	13	20	Yes .	8	17	200 00
Schoharie	Schoharie Academy	6	14	20	Not .	7	...	200 00
	Franklin Academy, Prattsburgh	8	7	10	Yes .	6	2	90 00
	Rogersville Union Seminary	7	13	20	Yes .	11	5	200 00
	Woodhull Academy	13	7	20	Not .	15	15	200 00
Sullivan	Liberty Normal Institute	1	19	20	Yes .	19	5	200 00

Tioga.....	Candor Free Academy .....	9	11	20	Not .	12	12	200 00
Tompkins .....	Owego Free Academy .....	10	11	21	Not .	19	16	*200 00
	Groton Academy .....	8	12	20	Not .	....	....	200 00
	Ithaca Academy .....	1	14	13	Not .	....	8	142 00
Warren .....	Trumanburgh Academy .....	7	9	16	Not .	8	3	160 00
	Glen's Falls Academy .....	2	12	14	Not .	10	6	140 00
Washington .....	Warrensburgh Academy .....	1	17	18	Not .	11	9	180 00
	Fort Edward Collegiate Institute .....	10	10	20	Not .	9	12	200 00
	Greenwich Union School .....	1	11	12	Yes .	11	3	70 00
Wayne .....	Sandy Hill Union School .....	....	15	15	Yes .	15	5	120 00
	Macedon Academy .....	13	7	20	Yes .	....	....	200 00
	Marion Collegiate Institute .....	4	15	19	Yes .	10	6	190 00
	Newark Union School and Academy .....	8	14	22	Not .	18	10	200 00
	Palmyra Classical Union School .....	6	16	22	Yes .	10	7	200 00
	Red Creek Union Seminary .....	7	3	10	Not .	3	....	100 00
	Sodus Academy .....	11	11	22	Yes .	21	16	200 00
Wyoming .....	Attica Union School .....	5	13	18	Yes .	4	3	180 00
	Middlebury Academy .....	7	13	20	Yes .	13	5	200 00
	Pike Seminary .....	9	13	22	Not .	16	7	200 00
Yates .....	Penn Yan Academy .....	9	8	17	Not .	....	3	170 00
		592	1,002	1,594		970	757	\$15,333 50

\* Apportioned in June, 1873.

## SCHEDULE No. 10—(Continued).

*Academies designated to instruct Teachers' Classes during the academic year 1873-4, under the provisions of the statute (University Manual, page 38, § 3).*

Provisional appointments, and the order of such appointments, are indicated by the figures annexed in parentheses.

Counties.	Names of Academies.
Allegany . . . . .	Alfred University, Academical Department. Friendship Academy. Genesee Valley Seminary.
Broome . . . . .	Deposit Academy. Whitney's Point Union School, Acad. Dept.
Cattaraugus . . . . .	Chamberlain Institute. Olean Union School, Academic Department. Ten Broeck Free Academy.
Cayuga . . . . .	Moravia Union School, Academic Department. Weedsport Union School, Acad. Department.
Chautauqua . . . . .	Forestville Free Academy. Jamestown Union School and Collegiate Inst. Westfield Union School, Acad. Department.
Chemung . . . . .	Elmira Free Academy.
Chenango . . . . .	Afton Union School, Academic Department. New Berlin Academy. Norwich Academy. Oxford Academy (3). Sherburne Union School, Acad. Department.
Clinton . . . . .	Plattsburgh High School.
Columbia . . . . .	Claverack Academy and H. R. Institute.
Cortland . . . . .	Cincinnatus Academy. Cortland Academy.
Delaware . . . . .	Delaware Academy. Delaware Literary Institute. Walton Union School, Acad. Department.
Erie . . . . .	Aurora Academy. Clarence Classical Union School. Griffith Institute. Hamburgh Union School, Acad. Dept. (4).
Essex . . . . .	Elizabethtown Union School, Acad. Dept. Keeseville Union School, Acad. Dept.
Franklin . . . . .	Fort Covington Academy (5).

<b>Counties.</b>	<b>Names of Academies.</b>
Genesee . . . . .	Batavia Union School, Acad. Department. Rural Seminary.
Herkimer . . . . .	Fairfield Academy. West Winfield Academy.
Jefferson . . . . .	Hungerford Collegiate Institute. Union Academy of Belleville. Watertown High School.
Lewis . . . . .	Lowville Academy.
Livingston . . . . .	Dansville Seminary.
Madison . . . . .	Canastota Union School, Acad. Dept. Central New York Conference Seminary (6). Yates Union School, Acad. Department.
Montgomery . . . . .	Fort Plain Seminary.
Niagara . . . . .	Lockport Union School, Acad. Department. Wilson Union School, Acad. Department.
Oneida . . . . .	Holland Patent Union School, Acad. Dept. Rome Academy. Whitestown Seminary.
Onondaga . . . . .	Baldwinsville Academy. Munro Collegiate Institute. Onondaga Academy (2). Syracuse High School.
Ontario . . . . .	Canandaigua Academy. Geneva Classical and Union School. Naples Academy.
Orleans . . . . .	Medina Free Academy. Yates Academy.
Oswego . . . . .	Falley Seminary. Mexico Academy. Pulaski Academy.
Otsego . . . . .	Gilbertsville Academy. Hartwick Seminary (7). Unadilla Academy.
Rensselaer . . . . .	Lansingburgh Academy. Nassau Academy.
St. Lawrence . . . . .	Canton Union School, Acad. Department. Gouverneur Wesleyan Seminary. Lawrenceville Academy. Massena Union School, Acad. Department.



Counties.	Names of Academies.
Saratoga . . . . .	Mechanicville Academy (1). Saratoga Springs Union School, Acad. Dept. Waterford Union School, Acad. Department.
Schoharie . . . . .	Cobleskill Union School, Acad. Department. New York Conference Seminary.
Seneca . . . . .	Ovid Union School, Acad. Department.
Steuben . . . . .	Canisteo Academy. Haverling Union School, Acad. Dept. Rogersville Union Seminary.
Sullivan . . . . .	Liberty Normal Institute. Monticello Academy.
Tioga . . . . .	Candor Free Academy.
Tompkins . . . . .	Groton Academy. Ithaca Academy.
Ulster . . . . .	New Paltz Academy.
Warren . . . . .	Glen's Falls Academy. Warrensburgh Academy.
Washington . . . . .	Fort Edward Collegiate Institute. Sandy Hill Union School, Acad. Dept. Washington Academy.
Wayne . . . . .	Macedon Academy. Palmyra Classical Union School. Sodus Academy.
Wyoming . . . . .	Arcade Union School, Acad. Dept. Pike Seminary.
Yates . . . . .	Penn Yan Academy.

### III. PRELIMINARY ACADEMIC EXAMINATION.

The regular examinations to be held during the academic year 1873-4, will occur as follows:

#### I. DAYS AND HOURS OF EXAMINATION.

- |                         |              |                         |                           |
|-------------------------|--------------|-------------------------|---------------------------|
| 1. Fall term, 1873,     | } Thursday { | Nov. 6th and 7th, 1873. |                           |
| 2. Winter term, 1873-4, |              | and {                   | Feb. 26th and 27th, 1874. |
| 3. Spring term, 1874,   | } Friday,    | {                       | June 4th and 5th, 1874.   |

#### THURSDAY.

Arithmetic (first session), two hours.....	10:00 A. M.	to 12:00 M.
Grammar (first sess.), one and one-half hrs.,	1:30	to 3:00 P. M.
Recess, one-half hour .....	3:00	to 3:30 “
Grammar (second session), one hour.....	3:30	to 4:30 “

#### FRIDAY.

Geography, one and one-half hours.....	9:00	to 10:30 A. M.
Recess, one-half hour .....	10:30	to 11:00 “
Spelling, one hour.....	11:00 A. M.	to 12:00 M.
Arithmetic (second session), two hours....	2:00	to 4:00 P. M.

#### II. CANDIDATES.

1. Scholars who are “presumed to have completed preliminary studies.” (*University Manual*, chap. xii, § 2.)

2. Scholars provisionally admitted to the academic class. (*Idem*, chap. xii, § 4.)

3. “Any scholar from any common school who may apply for such examination, bearing the certificate of the principal teacher, or of any trustee of such school, that in his judgment such scholar is qualified to pass the said examination.” (*Laws of 1873*, chap. 642, § 4.)

4. Hereafter, scholars claiming to have passed in some of the branches prior to June, 1870, must be re-examined in these branches, as well as in those on which they have not yet been examined.

## III. SUPERVISION.

5. The examination is to be held under the direction of a committee of at least three persons, appointed by the trustees of the academy or academical department, with the co-operation of the principal, in conformity with instructions issued by the Chancellor and Secretary of the University. (*Manual*, chap. xii, § 2.) The chief duty of the committee, by virtue of accepting this important trust, is to see that the instructions be rigidly observed in every particular. If any institution cannot command the services of a capable and efficient committee, and the constant presence of at least one member, it must forego the privilege of the examination.

## IV. QUESTION PAPERS.

6. Sets of printed questions in Arithmetic, English Grammar, Geography and Spelling, will be sent to the chairman of the examining committee the week before the examination, provided the number of sets of questions needed and the names of the committee be seasonably furnished. A circular, asking how many sets of questions will be needed, will be sent to each institution in advance of each examination; but in the event of its non-receipt at least ten days before the examination, the Secretary of the Regents should be informed by letter or otherwise how many questions are required. The chairman of the committee is to retain the questions in his own possession until the beginning of the examination in each subject.

7. In case of failure to receive in due time questions seasonably applied for, the examination may be held on the earliest practicable days thereafter, provided immediate notice of the delay be sent to the Secretary of the Regents, and that no scholars be admitted at any session who may have gained a knowledge of the questions from other sources.

## V. PRELIMINARY ARRANGEMENTS.

8. These instructions must be carefully examined by the committee and the principal, and must be read to the class at or before the beginning of the examination.

9. The candidates must be so arranged that no two shall occupy the same desk. If too numerous to be so arranged in a single room, they may be divided into two or more sections, and be examined at the same time, on the same subject, in different rooms, adequate supervision being provided for each section.

10. Each candidate must be supplied with white foolscap paper, with pen and ink, and, after all other preliminaries are completed, with a copy of the questions (spelling excepted) to be used at that session. The precise moment of the distribution of the questions must be observed and announced, as the examination proper begins at that instant. The expiration of the allotted time must also be announced, after which no further labor on the answers is to be allowed. Scholars should have the benefit of the full time assigned, but these limits must not be exceeded, and no scholar shall be allowed a second trial during the same examination.

#### VI. PROGRESS OF THE EXAMINATION.

11. Let no persons, except the committee, the principal and the scholars to be examined, enter the room during the examination; and let no scholar be allowed to leave the room during any session of it, unless his work is completed.

12. No inquiries are to be made or explanations given concerning the questions, and no person may overlook the work of the scholars while in progress.

13. Let any effort on the part of scholars to give or obtain aid, be followed by instant expulsion from the room.

14. The answers are to be written with ink and not with lead pencils, in the order of the questions, and are to be numbered to correspond with them. Special attention should be given to the general order, legibility and neatness, as well as correctness of the work, and to all directions given on the question papers. The proper statement of each example in arithmetic should be indicated, as far as practicable, by appropriate signs, and the solution should exhibit each and every step of the process by the which answer is obtained.

#### VII. CLOSE OF THE EXAMINATION.

15. At the expiration of the time allowed for the examination in geography and spelling, and for each session in arithmetic and grammar, the scholars are to make the declaration required on the question papers at the end of their respective lists of answers, and subscribe their names thereto, after which they are to fold and indorse their papers with the name of the academy and their own names, the subject and session (*first or second*, as the case may be, in arithmetic and grammar), and the date of the examination, and deliver the same to

the committee, to be retained by them, and in no case to pass again into the hands of the scholars. The answers of the second session in arithmetic and in grammar cannot be written on the same sheet with those of the first session without violating this direction, unless the intervening recess be omitted, for adequate specified reasons, and the committee certify that the work of both sessions was completed in one. The question papers are likewise to be returned to the committee, in good condition.

#### VIII. ESTIMATE OF RESULTS.

16. At least eighteen of the twenty-four questions in arithmetic, thirty of the forty in geography, sixty of the eighty in grammar, and eighty-five of the one hundred in spelling, must be correctly answered, as the condition of passing the examination. A larger per centage of correct answers on one subject cannot be applied to make up a deficiency on another. Each whole answer is to be taken as a unit and counted either *right* or *wrong*; in other words, fractional estimates are not to be made, unless specially allowed in certain cases by directions accompanying the questions. If reasonable doubts arise as to the correctness of answers, which may affect the final result, the papers containing such answers may be forwarded to the Secretary of the Regents for decision, with a particular statement of the ground of the doubt; otherwise, no papers containing less than the requisite number of correct answers are to be sent.

17. To relieve the committee of burdensome labor, the answers of the scholars may be examined by the principal and other teachers, and only such as, in their judgment, have the required number of correct answers are to be reported. In the papers which contain the required number of correct answers, the incorrect and omitted ones are to be distinctly marked and numbered.

#### IX. REPORT ON THE EXAMINATION.

18. The examining committee and the principal are to certify, in a prescribed form, attested by the oath of the principal, that all the Instructions have been fully and faithfully observed, and are to furnish the name, age, residence and number of correct answers of each pupil who has passed the examination in all or any of the required branches, together with the date of the earlier successful examinations in any of such branches, on which the claim in part for a certificate is based.

19. The four papers of each scholar claimed to have passed the examination in all the branches since June, 1870, inclusive, and only these, are to be forwarded, *prepaid*, to this office, together with the report of the committee, at the earliest practicable date. In arranging the papers for transmission, all those of each scholar are to be placed together. All incomplete sets of papers having the requisite number of correct answers (except those of earlier date than June, 1870) should be carefully preserved among the valuable papers of the academy, until they may be made complete at subsequent examinations. Any incomplete sets at present on file in the office of the Regents will be returned, at an early day, to the respective institutions from which they were received, for due preservation.

20. The printed questions are to be preserved, as far as practicable, from being soiled or mutilated, and returned to this office in a separate *prepaid* package, as printed matter, by post or otherwise.

#### X. REVISION OF THE RETURNS.

21. All the sets of answers transmitted to the Regents, as above directed, are re-examined under their direction, and such as are not on the whole satisfactory, are disallowed and returned, with reasons indorsed. During the last two years, from fifteen to twenty per cent of the papers claimed to contain the requisite number of correct answers, have been disallowed, and in some instances the entire results of a local examination have been rejected. The examination of such papers imposes unreasonable labor on this office, and the forwarding of them is regarded as discreditable to the institution.

#### XI. CERTIFICATES.

22. The Regents' Certificate of Academic Scholarship, entitling the person to whom it is granted to admission, without further examination, into the academic class in any academy or academical department subject to the visitation of the Regents, and to certain free instruction, under the provisions of the act, chapter 642 of the Laws of 1873, will be issued to each pupil, duly certified as having passed in all the prescribed branches, and whose papers are found satisfactory on re-examination at this office, at the earliest practicable date after the receipt of the report of the committee. The Regents, however, reserve the right to revoke any certificate, on evidence satisfactory to them, showing that it was obtained through any disregard or violation of their Instructions.

## XII. CONCLUSION.

23. A copy of these Instructions is sent by post to the Chairman of the Examining Committee, and another copy, with the blank form of report, to the Principal of each academy applying for the examination questions.

24. *As the foregoing Instructions are a revision of those of former years, they must be carefully preserved and used in connection with each examination held during the academic year (1873-4).*

By order.

S. B. WOOLWORTH,  
*Secretary.*

UNIVERSITY OF THE STATE OF NEW YORK.

Preliminary Academic Examination,

Held at the Academical Institution known as .....

.....  
(If a Union School, begin with the proper name, as e. g., Greenwich Union School, Acad. Dept.)  
on the .... and .... days of ....., 187 .

CERTIFICATE OF THE EXAMINING COMMITTEE.

The undersigned, appointed by the trustees of .....  
..... a committee to attend an examination of students for  
the Academic Class in said Institution, as required by the ordinance  
of the Regents of the University (*University Manual*, Chapter XII,  
pp. 82-84), do hereby certify that at least one of their number  
attended the examination, on each subject, held on the days above  
named, and that the following is a summary of the results:

	Arith.	Geog.	Gram.	Spelling.
1. Number admitted to the said examination in each branch .....				
2. Number who passed in each branch, at said examination .....				
3. Number who passed in some of the studies at previous examinations, but not earlier than June, 1870, and included under next head (4) .....				
4. Number claimed to be entitled to the Uni- versity Certificate, as the result of this examination .....				

The committee further certify that the examination was conducted  
in all respects as prescribed in the *Manual* aforesaid, the directions  
contained in the *Revised Instructions* dated October 25, 1873, and  
those printed on the envelopes containing the questions; that all the  
papers herewith forwarded containing the required number of cor-  
rect answers, are as they were originally written during the respective  
sessions of the examination, by the students whose names are  
indorsed on them, without addition, explanation or other aid from  
any source; and that the following is a true list of the names, ages  
and residences of the scholars claimed to be entitled to the said cer-  
tificate, and of those not yet entitled to the certificate, but who



passed in one or more branches at the said examination, together with the number of questions correctly answered by them in the branches in which they passed, and the dates of former examinations at which those claimed to be entitled to certificates passed in any of the branches.

All of which is hereby certified this ..... day of  
....., 187 .

Attest,	.....	} Committee.
.....	.....	
Principal.	.....	

AFFIDAVIT OF THE PRINCIPAL.

STATE OF NEW YORK, }  
County of ..... }  
being duly sworn, deposes and says that he is the Principal of  
.....  
that the preliminary academic examination was held on the .....  
and ..... days of ....., 187 , as directed by the Regents of  
the University, that their instructions as to the mode of conducting  
the same were observed in every particular, and that the annexed  
report by the Committee and Principal as to the results of said  
examination is true.

(Signed)  
.....,  
Principal.

Subscribed and sworn before me, {  
this . . . day of ....., 187 . } ss. :

.....

Let the above certificate and the accompanying blank for the list of students be filled and forwarded, within one month after the examination, to the Secretary of the Board of Regents, together with the written answers of all scholars claimed to be entitled to certificates.

*Alphabetical List of Scholars of .....*  
 who have passed the examination (1) in Arithmetic, Geography, Grammar and Spelling collectively; and (2) in only a part of these branches; together with the number of correct answers in each branch in which those claimed for certificates have severally passed, either at this or any former examination, and the dates (month and year, *e. g.*, Nov., June, 1872, etc.) of former examinations in any of the branches (exclusive, in all cases, of those who have already received certificates).

REGENTS' COLUMNS.		Nos.  1, 2, 3, etc.	NAMES.  Write each name <i>legibly</i> . Give the Christian name in full, and the initial of middle name. Make separate lists of males and females. Arrange the surnames of each list in alphabetical order.	Ages.	RESIDENCES.	NUMBER OF CORRECT ANSWERS IN				DATE OF FORMER SUCCESSFUL EXAMINATION (IF ANY) NOT EARLIER THAN JUNE, '70, IN			
General Numbers.	Local Numbers.					Arithmetic.	Geography.	Grammar.	Spelling.	Arithmetic.	Geography.	Grammar.	Spelling.

## UNIVERSITY OF THE STATE OF NEW YORK.

*Preliminary Academic Examination.**By the Regents of the University of the State of New York:*

*Whereas, The Committee of Examination and the Principal of*  
 .....  
 have certified to the Regents of the University that at an examination, held by their appointment, on the ... and ... days of ....., 187 , ..... was found to have attained the proficiency required by their ordinance, for admission to the Academic Class ;

Now, therefore, be it known, that the aforesaid .....  
 ..... has been registered in the office of the said Regents of the University as an

## ACADEMIC SCHOLAR,

and that all Academies and Institutions of learning in this State, subject to their visitation, are authorized to receive h.... as such, without further examination.

In witness whereof, the said Regents have caused the names of their Chancellor and Secretary to be hereunto affixed, at the city of Albany, this .... day of ....., one thousand eight hundred and seventy-....

JOHN V. L. PRUYN,  
*Chancellor of the University.*

S. B. WOOLWORTH,  
*Secretary.*

[The names of the Regents of the University, and the name of the Academy at which the examination was passed, are indorsed in print; also the general and local number of the certificate, and the counter-signature of the Principal.]

*Questions.*

The character of the questions prescribed by the Regents is shown by the following set, used at the examination held June 6th and 7th, 1872:

## UNIVERSITY OF THE STATE OF NEW YORK.

## PRELIMINARY ACADEMIC EXAMINATION.

## FIRST ARITHMETIC SESSION.

TIME, TWO HOURS.

Each scholar is to declare, at the close of the second session, over his signature, that he had no previous knowledge of these questions, and that he has neither given nor received aid in answering any of them, if this be true.

The mere answers are not sufficient; the *solutions* are also to be given.

1. If the minuend be 69 trillion and the difference 55 billion, what is the subtrahend?
2. If 892 is one factor, and 28544 the product, what is the other factor?
3. Resolve 180 into its prime factors.
4. Find greatest common divisor of 222 and 564.
5. Reduce 8692 to a fraction whose denominator is 25.
6. What cost  $5\frac{1}{2}$  cords of wood, at \$7.56 a cord?
7.  $\frac{5}{7}$  of  $\frac{1}{2}$   $\div$   $\frac{5}{9}$  of  $\frac{2}{3}$  of  $\frac{3}{4}$  = what?
8. A body of 4800 troops has  $\frac{1}{3}$  as many cavalry as infantry; what is the number of infantry?
9.  $3\frac{1}{2} + 2\frac{5}{8} + 7\frac{8}{9}$  = what?
10. The product of three numbers is  $74\frac{1}{2}$ ; two of them are  $8\frac{1}{2}$  and  $6\frac{1}{3}$ ; what is the third?
11. Reduce 2 m. 5 f. 13 r. 4 yd. 2 ft. to inches.
12. What would be the cost of enough oil-cloth to cover a room  $12 \times 16\frac{1}{2}$  feet, at 75 cts. per sq. yd.?

Fold your paper in proper form for filing, and indorse it with the name of the institution, your own name, and the subject and date of the examination.

The diagram below represents the outer page of an open foolscap leaf or sheet, after being properly folded and filed.

No answers to questions should be written upon this outer page, and especially upon the section to be reserved for the filing entries.

Ames Acad. John Smith. Arithmetic. June 6, 1872.				(Lower End.)
(Upper End.)				

To fold the paper as it lies with the outer page upon the desk before you, place the lower edge upon the upper edge of the leaf or sheet, hold the two edges in place with the left hand, and make the fold across the middle of the leaf with the right hand; finish the folding by repeating the same process.

### SECOND ARITHMETIC SESSION.

TIME, TWO HOURS.

13. At \$198 per lb., what will be the cost of 10 oz. 10 pwt. 10 gr. of gold?

14. What is the difference in time of two places whose longitudes differ  $7^{\circ} 8' 4''$ ?

15. Write in figures (the fractional part as *decimal*) the number: seven million, and one ten-millionth.

16.  $49.2654756 \div .0759 = \text{what?}$

17. Reduce .8975 of a week, to whole numbers of lower denominations.

18. What is the amount of \$1,000 for 7 y. 10 m. 18 d., at 6 per cent simple interest?

19. What is the present worth of \$1,609.30 for 10 m. 24 d., discounted at 5 per cent?


20. For what must apples, which cost \$1.25, be sold to gain 20 per cent?

21. If \$800 yield \$56 interest in a certain time, what will \$390 yield at the same rate?

22. If a 3-cent loaf weigh 2 oz., when flour is \$7.50 per bbl., what should a 12-cent loaf weigh when flour is \$16 per bbl.?


23. What number expresses the difference between the square and the cube of 24?

24. What is the square root of 253009?

 Do you now, at the close of the examination in Arithmetic, conscientiously declare that, prior to each session, you had no knowledge of the questions to be proposed thereat, and that you have neither given to any other scholar, nor received from any source, aid in answering any of them? If so, write in the next line after the end of your set of answers, near the right side of the paper the words

“ I do so declare,”

and directly underneath this subscribe your name.

 Fold your paper in proper form for filing, and indorse it with the name of the institution, your own name, and the subject and date of the examination.

[The same requirements are made in connection with the examination in Geography, Grammar and Spelling.]

### GEOGRAPHY.

TIME, ONE AND ONE-HALF HOURS.

1. How are the Arctic and Pacific Oceans connected?

2. On which hemisphere (eastern or western) is the meridian  $170^{\circ}$  east longitude from Greenwich?

3. Is New Zealand in the eastern or the western hemisphere?
4. Mention a river of North America that flows in a northerly direction.
5. Mention one of the rivers of Maine.
6. How many square miles in the State of New York (in round numbers)?
7. Which State has the larger territory; New York or California?
8. What is the population of the State of New York (in round numbers)?
9. How many counties are there in New York State?
10. Which county of New York extends farthest east?
11. What State bounds Kansas on the east?
12. What is the capital of Illinois?
13. What States would be crossed in passing direct from Indiana to Alabama?
14. Mention any one of the United States which has no sea nor lake coast.
15. Mention a tributary of the Missouri River.
16. Mention one of the peninsulas adjacent to the Gulf of Mexico.
17. Which is nearer the equator; Cuba or Jamaica?
18. What country bounds the Argentine Confederation on the north?
19. What large river of Colombia, S. A., empties into the Caribbean Sea?
20. What large sea is situated about midway between the Adriatic and Caspian Seas?
21. Mention one of the gulfs adjacent to the Baltic Sea.
22. In what direction is Corsica from Sardinia?
23. What noted river empties into the Dead Sea?
24. On which coast of Africa is Senegambia?

## FIRST GRAMMAR SESSION.

TIME, ONE AND ONE-HALF HOURS.

## EXERCISE.

(a) As a man, who was deeply involved in debt, was walking in the street with a very melancholy air, one of his acquaintances asked him why he was so sorrowful. (b) "Alas!" said he, "I am in a state of insolvency." (c) "Well," said his friend, "if that is the case, it is not you, but your creditors, who ought to wear a woeful countenance."

Write each one of the following words, with its number prefixed, and immediately thereafter, the *part of speech* (or *class of words*) to which it belongs:

Sentence (a): (1) *As*; (2) *who*; (3) *deeply*; (4) *debt*; (5) *in*; (6) *air*; (7) *one*; (8) *acquaintances*; (9) *asked*; (10) *why*; (11) *sorrowful*.

Sentence (b): (12) *Alas!*; (13) *he*; (14) *am*.

Sentence (c): (15) *Well*; (16) *that*; (17) *but*; (18) *your*; (19) *ought*; (20) *wear*.

Write each one of the following words, with its number prefixed, and immediately thereafter the word (or words) to which it is related as a principal element (*subject*, *predicate* or *object*),—if this be the case,—or to which it belongs as an adjunct, if it have either adjective or adverbial force:

Sentence (a): (21) *man*; (22) *who*; (23) *very*; (24) *melancholy*; (25) *asked*; (26) *him*; (27) *sorrowful*.

Sentence (b): (28) *he*; (29) *state*; (30) *insolvency*.

Sentence (c): (31) *said*; (32) *his*; (33) *that*; (34) *case*; (35) *not*; (36) *creditors*; (37) *ought*; (38) *wear*; (39) *woeful*; (40) *countenance*.

Select from sentence (a), a word in the (41) *nominative case*; one in the (42) *possessive case*; and one in the (43) *objective case*. [Number answers as before.]

Mention the (44) *first verb* of the exercise, and give its (45) *voice* (or *form*), (46) *mood*, (47) *tense*, and (48) *subject*.

Give the (49) *first*, (50) *second*, (51) *third*, and (52) *fourth principal parts* of the last verb of the exercise.

Give the *third person, singular number* of the first verb in sentence (b), in each of the tenses of the indicative mood, *i. e.*: (53) *present*; (54) *imperfect* (or *past*); (55) *future*; (56) *perfect* (or *prior present*); (57) *pluperfect* (or *prior past*); (58) *future perfect*.

Give the (59) *comparative*, and the (60) *superlative* forms of the last adjective of the exercise.

## SECOND GRAMMAR SESSION.

TIME, ONE HOUR.

### EXERCISE.

(a) As a man, who was deeply involved in debt, was walking in the street with a very melancholy air, one of his acquaintances asked him why he was so sorrowful. (b) "Alas!" said he, "I am in a state of insolvency." (c) "Well," said his friend, "if that is the case, it is not you, but your creditors, who ought to wear a woeful countenance."

61. What word of the exercise has no *syntax* (or grammatical relation to other words)?

62. Select, from the exercise, an example of a *simple sentence* (or *independent proposition*).

63. Is sentence (a) *simple* or *compound* (or *complex*) in its structure?

64. Answer the same question (63), with reference to sentence (b).

65. What is the *grammatical subject* of the principal (or independent) clause of sentence (c)?

66. Change "*was walking*" to the form of the *pluperfect* (or *prior past*) tense of the same mood.

67. Change the verb of the expression "*was deeply involved*" to the *potential mood*, *perfect* (or *prior present*) *tense*, of the same *voice* (or *form*).

68. Change "*one of his acquaintances asked him*," to its equivalent having the verb in the *passive voice*.

69. Change "*if that is the case*" so that the verb shall be *subjunctive* in form.

70. In what number is "*who*" in sentence (c)?

71. In what words was the question referred to in sentence (a) put by the asker (or speaker)?

72. What words does "*with*," in sentence (a), connect or show the relation between?

73. What interrogative word occurs in sentence (a)?

74. What kind of a conjunction is "*but*"?

75. In what case is the word "*case*," sentence (c)?

76. In what tense is "*ought*," sentence (c)?

77. In what case is "*countenance*," sentence (c)?

78. What word (potential mood sign) might be substituted for "*ought to*," in sentence (c)?

79. Of what words is "*woeful*" compounded?

80. Which one of the five permanent vowels does not occur in "*countenance*?"

## EXERCISE IN SPELLING.

TIME, ONE HOUR.

Each italicised word in the following exercise is to be written by each pupil. Let the principal read each sentence and then distinctly and properly pronounce every italicised word (with its number prefixed), allowing sufficient time for writing it before the next word is pronounced.

Any mode of spelling a word approved by either Webster or Worcester, may be accepted.

### EXERCISE.

*Patience*.—*Spurgeon*.

(1) *Patience* is (2) *better* than wisdom; an (3) *ounce* of patience is worth a pound of (4) *brains*. All men (5) *praise* patience, but few (6) *enough* can practice it; it is a (7) *medicine* which is good for all (8) *diseases*,



and therefore every old woman (9) *recommends* it; but it is not every garden that grows the (10) *herbs* to make it with. When one's flesh and bones are full of (11) *aches* and (12) *pains*, it is as (13) *natural* for us to (14) *murmur* as for a horse to shake his head when the (15) *flies* (16) *tease* him, or a wheel to (17) *rattle* when the spoke is loose; but nature should not be the rule with (18) *Christians*, or what is their (19) *religion* worth? If a (20) *soldier* fights no better than a ploughboy, (21) *off* with his red (22) *coat*. We (23) *expect* more (24) *fruit* from an (25) *apple-tree* than from a (26) *thorn*, and we have a (27) *right* to do so. The (28) *disciples* of a patient (29) *Saviour* (30) *should* be patient (31) *themselves*. Grin and (32) *bear* it is the (33) *old-fashioned* (34) *advice*, but sing and bear it is a (35) *great* (36) *deal* better. After all, we get (37) *very* few cuts of the (38) *whip*, (39) *considering* what bad (40) *cattle* we are; and when we do smart a little, it is (41) *soon* over. Pain past is (42) *pleasure*, and (43) *experience* comes by it. We (44) *ought* not to be (45) *afraid* of going down into (46) *Egypt*, when we know we shall come out of it with (47) *jewels* of silver and gold.

Impatient (48) *people* water their (49) *miseries*, and (50) *hoe* up their (51) *comforts*; (52) *sorrows* are (53) *visitors* that come without (54) *invitation*, but (55) *complaining* minds send a (56) *wagon* to bring their (57) *troubles* home in. (58) *Many* people are born (59) *crying*, live complaining and (60) *die* (61) *disappointed*; they (62) *chew* the (63) *bitter* pill which they (64) *would* not even know to be bitter if they had the (65) *sense* to (66) *swallow* it (67) *whole* in a cup of patience and water. They think every other man's (68) *burden* to be (69) *light* and their own (70) *feathers* to be (71) *heavy* as (72) *lead*; they are hardly done by in their own (73) *opinion*; no one's (74) *toes* are so often (75) *trodden* on as (76) *theirs*; the snow falls (77) *thickest* round their (78) *door*, and the hail (79) *rattles* hardest on their (80) *windows*; and yet if the truth were (81) *known*, it is their (82) *fancy* rather than their fate which makes things go so hard with them. A little sprig of the herb called (83) *content* put into the (84) *poorest* (85) *soup* will make it taste as rich as the Lord Mayor's (86) *turtle*. John (87) *Ploughman* (88) *grows* the plant in his garden, but the late hard winter (89) *nipped* it (90) *terribly*, so that he cannot (91) *afford* to give his (92) *neighbors* a slip of it; they had better (93) *follow* (94) *Matthew* xxv, 9, and go to those who sell and (95) *buy* for themselves. (96) *Grace* is a good (97) *soil* to grow it in, but it wants (98) *watering* from the (99) *fountain* of (100) *mercy*.

# IV. THE UNIVERSITY CONVOCAATION

## OF THE

### STATE OF NEW YORK.

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#### I. SKETCH OF ITS ORIGIN, OBJECTS AND PLAN.

[Reprinted from the Proceedings of former years, by direction of the Convocation.]

At a meeting of the Regents of the University, held on the 9th day of January, 1863, the reports of colleges and academies, and their mutual relations, being under consideration, the following resolution was unanimously adopted :

*Resolved*, That it is expedient to hold annually, under the direction of this Board, a meeting of officers of colleges and academies, and that a committee be appointed to draft a programme of business for the proposed meeting, to fix the time and place, and to make such other arrangements as they may deem necessary.

The committee of arrangements on the part of the Regents were Chancellor Pruyn, Governor Seymour, Mr. Benedict, Mr. Hawley, Mr. Clinton, Mr. Perkins and Secretary Woolworth.

The meeting was held according to appointment, on the 4th and 5th days of August, 1863. Chancellor Pruyn briefly stated the objects entertained by the Regents, which were mainly "to consider the mutual relations of colleges and academies, and to promote, as largely as possible, the cause of liberal education in our State. While it is a part of the duty of the Regents of the University to visit the fourteen\* colleges and more than two hundred academies subject to their supervision, it is obvious that this cannot be done as frequently as desirable, and that some such method as is now proposed, whereby teachers may compare views with each other and with the Regents, and discuss methods of instruction and general modes of procedure, is alike practicable and necessary.

"A law enacted more than three-fourths of a century ago was cited, by which the University was organized and clothed with powers similar to those held by the Universities of Cambridge and Oxford in

\* Now twenty-two (1873).

England. The University of the State of New York, though generally regarded as a legal fiction, is, in truth, a grand reality. The numerous institutions of which it is composed are not, indeed, as in England, crowded into a single city, but are scattered, for popular convenience, over the entire State. It is hoped that the present meeting will more fully develop this fact, in accordance with which the officers of colleges and academies now convened are cordially welcomed as members of a great State University. It is also confidently expected that the deliberations now inaugurated will result in the more intimate alliance and coöperation of the various institutions holding chartered rights under the Regents of the University."

The Chancellor and Secretary of the Regents were, on motion, duly elected presiding and recording officers of the meeting. A committee, subsequently made permanent for the year and designated as the executive committee, was appointed by the Chancellor to prepare and report an order of proceedings. Among other recommendations of the committee, the following were submitted and unanimously adopted :

The Regents of the University of this State have called the present meeting of the officers of the colleges and academies subject to their visitation, for the purpose of mutual consultation respecting the cause of education, especially in the higher departments. It becomes a question of interest whether this convention shall assume a permanent form and meet at stated intervals, either annually, biennially or triennially. In the opinion of the committee it seems eminently desirable that the Regents and the instructors in the colleges and academies should thus meet, with reference to the attainment of the following objects :

1st. To secure a better acquaintance among those engaged in these departments of instruction, with each other and with the Regents.

2d. To secure an interchange of opinions on the best methods of instruction in both colleges and academies ; and, as a consequence,

3d. To advance the standard of education throughout the State.

4th. To adopt such common rules as may seem best fitted to promote the harmonious workings of the State system of education.

5th. To consult and coöperate with the Regents in devising and executing such plans of education as the advanced state of the population may demand.

6th. To exert a direct influence upon the people and the Legislature of the State, personally and through the press, so as to secure such an appreciation of a thorough system of education, together with

such pecuniary aid and legislative enactments, as will place the institutions here represented in a position worthy of the population and resources of the State.

And for the attainment of these objects the committee recommend the adoption of the following resolutions :

*Resolved*, That this meeting of officers of colleges and academies be hereafter known and designated as "The University Convocation of the State of New York."

*Resolved*, That the members of this Convocation shall embrace,

1. The members of the Board of Regents.

2. All instructors in colleges, normal schools, academies and higher departments of public schools that are subject to the visitation of the Regents, and (by amendment of 1868) the trustees of all such institutions.

3. The president, first vice-president and the recording and corresponding secretaries of the New York State Teachers' Association.

*Resolved*, That the Chancellor and Secretary of the Board of Regents shall act severally as the presiding officer and permanent secretary of the Convocation.

*Resolved*, That the meeting of this Convocation shall be held annually in the city of Albany, on the first Tuesday of August, at ten o'clock A. M., unless otherwise appointed by the Board of Regents.

*Resolved*, That at each annual Convocation the Chancellor shall announce the appointment, by the Regents, of an executive committee of seven members, who shall meet during the recess of the Convocation at such time and place as the Regents may direct, with authority to transact business connected with its general object.

At the fifth anniversary, held August 4th, 5th and 6th, 1868, the following resolutions were unanimously adopted :

*Resolved*, That there be appointed by the Chancellor at each annual meeting, a committee of necrology, to consist of three persons.

*Resolved*, That it shall be the duty of each member of the Convocation to notify the chairman of the committee of necrology of the decease of members occurring in their immediate neighborhood or circle of acquaintance, as an assistance to the preparation of their report.

*Resolved*, That the secretary publish, with the report of each year's proceedings, the original resolutions of 1863, as they are, or may be from time to time amended, together with the two foregoing, as a means of better informing the members of the Convocation in regard to its nature, and the purposes of its organization.

## II. MINUTES OF THE NINTH ANNIVERSARY, AUGUST 6, 7 AND 8, 1872.

The sessions of the ninth anniversary of the University Convocation of the State of New York were held, pursuant to adjournment, at the Assembly Chamber in the Capitol, in the city of Albany, commencing on Tuesday, August 6th, 1872, at 10:30 A. M., and closing on Thursday, August 8th, at 2 o'clock P. M.

The Chancellor of the University (Mr. Pruyn), as President *ex officio*, called the Convocation to order, and Rev. Dr. Van Rensselaer, President of Hobart College, said the Lord's Prayer.

The Chancellor formally welcomed the members in attendance, and stated that this duty was to have been performed by Regent Benedict, who in the Chancellor's absence in Europe, during most of the year, has acted as Chancellor *pro tempore*; but Mr. Benedict's engagements as a member of the Court of Impeachment, now in session at Saratoga, have unfortunately detained him from being present. This is the more to be regretted because from his long and active connection with the Board of Regents, his words could not fail to be both appropriate and acceptable.

The Chancellor expressed the hope that this meeting would fully realize the good anticipated to the cause of education in this State.

The Executive Committee appointed at the last Convocation, and having in charge, in connection with the officers of the Board of Regents, the arrangements for this anniversary, consisted of the following persons:

Professor William D. Wilson, D. D., LL. D., L. H. D., Cornell University.

Warden Robert B. Fairbairn, D. D., St. Stephen's College.

President Joseph Shea, S. J., St. John's College.

Principal William J. Milne, A. B., Geneseo Normal School.

Principal Samuel D. Barr, A. M., Penn Yan Academy.

Ex-Principal Jonathan Tenney, A. M., Owego Free Academy.

Principal T. Newton Willson, A. M., Troy Academy.

The Chairman of the Executive Committee, Dr. Wilson, reported the following order of exercises for the first day, which was approved by the Convocation:

## ORDER OF EXERCISES.

Sessions 10½ A. M. to 1½ P. M.; 3½ to 5½ P. M.; 8 P. M.

*Tuesday, August 6.*

10:30 A. M.—Opening of the Convocation, and Preliminary Report of the Executive Committee.

11 A. M.—The Academy as the Educator of Common School Teachers—Principal Miner H. Paddock, A. M., Medina Free Academy.

11:45 A. M.—Ethical Aspects of Science—Professor Cornelius M. O'Leary, A. M., M. D., Ph. D., Manhattan College.

12:30 P. M.—The New Departure in Education—Principal Erastus F. Bullard, A. M., Keeseville Academy.

1:15 P. M.—Miscellaneous Business.

1:30 P. M.—Recess.

3:30 P. M.—The Good of Life in College—Professor Edward North, L. H. D., Hamilton College.

4:15 P. M.—The Modifications of the established Curriculum requisite and legitimate in Colleges for young Women—President George W. Samson, D. D., Rutgers Female College.

5:00 P. M.—Miscellaneous Business.

5:30 P. M.—Recess.

8:00 P. M.—Report on the Increase of the Literature Fund—President Jonathan Allen, A. M., Alfred University, Acad. Dept., Ch'n of Committee.

8:30 P. M.—Agricultural Education—Professor John Stanton Gould, Cornell University.

Principal Miner H. Paddock, A. M., of Medina Free Academy, read a paper entitled "The Academy as the Educator of Common School Teachers."

The following is an abstract of Principal Paddock's paper: \*

1. In discussing this subject, he proceeded to show, first, the character of the work to be done. This is a great work, yet like many great things in nature, very simple and elementary. It is important to keep this distinction clearly in view, lest when we should have secured an effective teacher of simple things, we furnish instead a costly and "complicated one."

2. The teacher we propose to furnish, like every implement of husbandry, should be as inexpensive as possible, consistent with effective results of the simple character described. The limit of attainments ordinarily required for a district school teacher lies so close to the ordinary knowledge possessed by the people, that it does not surprise us to see any young man or woman of fair abilities become a successful district school teacher.

After showing that legal, medical, and even theological pursuits are

\* Many of the persons who read papers before the Convocation, or who participated in the discussions, furnished abstracts of their statements, at the request of the Secretary, for publication in the daily newspapers. Such abstracts are preserved in these minutes, to which most of the papers in full are appended.



carried forward to a certain extent by non-professional workers, he proceeded to show the special adaptation of academies and union schools to prepare, by a limited course of instruction in their several localities, the teachers required for the great majority of our district schools, instead of a large number of special normal and training schools. This position was sustained by six objections to such special training system:

1. The simplicity of the work.
2. The necessary discount to be made, from all graduating classes, of unsuccessful and unemployed teachers.
3. The great expense of establishing and maintaining normal schools.
4. The high wages demanded by professionally trained teachers.
5. The diversion from the academies, in large numbers, of pupils who ought to prepare for college, or for other pursuits than teaching.
6. The rivalry and animosity engendered by a system which distributes State aid so unequally in different localities.

The facilities offered by academies and union schools were enumerated:

1. They have the scholars at hand, or within their immediate vicinity.
2. The original outlay for building, etc., is comparatively very small.
3. A very moderate amount of State aid will render each of these schools thoroughly effective in all their departments.
4. Under this stimulus, these schools would furnish large numbers of candidates for the colleges.
5. There would be no necessary discount for those disqualified to teach, as this would not be the sole object of the instruction given.
6. The advantages of home for the scholar, and of local recognition for the successful teacher, would be much more largely enjoyed.
7. The academies are entirely competent to do this work.
8. All valuable and improved methods of teaching and training can be employed and would become more widely diffused under this system.
9. The work must and will be mainly done in this way.

The speaker closed by showing the interests of academies and union schools alike, in the matter of obtaining, as educators of teachers, due recognition from the State in her legislative appropriations.

Professor Cornelius M. O'Leary, A. M., M. D., Ph. D., of Manhattan College, read a paper on the "Ethical Aspects of Science."

This paper was discussed, generally in terms of high approval, by President Samson, of Rutgers' Female College; Dr. Steele, of Elmira; Principal Gallup, of Houghton Seminary; Professor Wilson of Cornell University, and Chancellor Pruyn.

Principal Erastus F. Bullard, A. M., of Keeseville Academy, read a paper entitled "The New Departure in Education," of which the following is a brief synopsis (Regent Warner in the chair):

With all the wisdom of the past we do not yet venture to say that we are the wisest men that have lived. Do we, indeed, wholly avoid the failures of our fathers? How much do we improve upon their successes? They were men of progress and friendly to reform. And were they to appear among us to day should we have to plead excuse for what we have done? Would they recognize in us their rightful successors?

No one will contend that no departure has been taken from the course so long pursued by the revered teachers of the past. But we may well ask why was any departure at all necessary from a system which confessedly produced the ripest scholars, the ablest statesmen the world has yet seen. Shall we answer that discovery and invention have conditions of life, that the system of our fathers had its day, or that the spirit of the age demanded it? No. The new is the natural development of the old. It is the tree with its broad spreading branches of which the old was the promise.

Again, it may be asked in what spirit was the departure taken; and what spirit is now shaping its course? Was it to render the mind an instrument for gain to subject the noble powers to the ignoble service of mere physical want? Or was it for the sake of a true culture, to give man all that will best fit him to comprehend, appreciate and gain the end of a true manhood and a true life?

It may still further be asked, what are the aims of the new departure and their actual tendencies? First, it aims to be comprehensive, to garner within its course all the treasures of the world's wisdom. But does not a system comprehending so much, tend more to dissipation in aim and effort than to order and system, to shallowness than to soundness and depth in scholarship? How do the results thus far compare with the old system? Second, it aims to be practical. This, indeed, should be and is the end of every true system of education. But the tendency of this practical aim, first, is to pervert the meaning of the term itself; second, to lead into error as to what education really is; third, to lead into error as to the best process of educating; and fourth, to lead into error as to the true end and office of education. In the third place, the new departure aims at economy. It is the aim and purpose of the new schools to make education as cheap and quick as possible. But to educate requires time. It requires directness of aim and purpose. As educators, we need first of all to teach that life is more than a trade, that the things most truly practical in it are those which contribute most to happiness, virtue and truth. We need make it a high aim to teach what a true culture really is, something of what it costs, its best means, and its true end. When this is fully accomplished, will there then be need of another departure in education?

Recess until three o'clock P. M.



## AFTERNOON SESSION—THREE AND ONE-HALF O'CLOCK.

Professor Edward North, L. H. D., of Hamilton College, read a paper on "The Good of Life in College."

He began by saying that a college instructor might not be regarded as an impartial judge of the advantages of collegiate discipline. He might be likened to a judge on the bench, with a bribe in his pocket. In order to avoid this objection, twenty letters had been sent out to as many graduates, in which they were asked "what was the best thing they had gained from their life in college?" The question was addressed to graduates of different institutions, who have reached the maturity of their powers, and who represent all departments of intellectual labor. The replies to this question point to such a variety of advantages from undergraduate discipline that they suggest a feeling of hopefulness even in the case of graduates, of good character and industrious habits, who fail to distinguish themselves in mathematics, or classics, or metaphysics.

Three graduates wrote that the best thing they learned in college was a knowledge of themselves and what they were good for. Three were especially grateful because their college studies introduced them into the republic of letters; four, because the college gave them mental discipline; three, because the study of ancient classics conferred the power of expression and a mastering of the English language. One graduate gained in college the habit of close observation; three wrote that they were nurtured and strengthened in religious character; three were confident that the friendships and social culture of college years were well worth all the expense incurred.

The subject of Professor North's paper was discussed, and his treatment of the same was highly commended by Dr. Clarke, Secretary Woolworth, and Principal Gregory, of Geneseo Academy.

President George W. Samson, D. D., of Rutgers Female College, read a paper on "The Modifications of the Established Curriculum requisite and legitimate in colleges for young women."

The paper referred to the arrangements for collegiate lectures to young women made the past year near the Universities of London and Cambridge, England; to female colleges now organizing in Russia and Germany, and as proposed in France, and to the numerous calls for similar provisions in America, namely, the admission of young women to our established colleges, and the forward steps taken in the State of New York to provide special institutions for women, which afford college training and grant college degrees. It was stated that in every age and nation the standard of general culture is dependent on female education, as even the Japanese are learning. It was urged that woman's special cast of mind and her sphere give her a moulding influence over mature men and children which demands an education as complete as that given to young men, while the successful performance of the duties of life required of most women indicates the importance and efficiency of full collegiate education. That cast

of mind and that sphere of influence suggest that some modifications in the established college curriculum are requisite. The amount of ancient languages should be less and their attainments in modern languages higher than in colleges for young men. Their mathematical studies should be abbreviated in their application to the mechanic arts and extended in their relation to the fine arts. Other minor modifications were hinted. As the State of New York has recently given charters authorizing female colleges to give the degrees conferred in other colleges, "except professional," they should not do discredit in these modifications to their trust.

The subject of President Samson's paper gave rise to an animated discussion, in which Regent Warner, Principals Gallup, Clarke and Gregory, and Professors Wilson and Gould, participated. One point made in the discussion was that what is needed is not so much a change of curriculum as some means of increasing the physical stamina of women. The opinion was expressed that there may be danger of too much brain labor in our schools for women, especially in view of the conceded degeneracy, in almost all cases, in the offspring of persons of great intellectual culture.

The Convocation then took a recess until eight o'clock P. M.

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#### EVENING SESSION—EIGHT O'CLOCK.

President Jonathan Allen, of Alfred University, chairman of the committee of ten appointed by the last Convocation "to secure by legislative action the increase of the Literature Fund," made an extended report on this subject, and submitted the following resolution, which was laid over for further consideration :

*Resolved*, That this Convocation appoint a committee of fifteen to secure, with the coöperation of the Regents, the perpetuity of the legislation already obtained, and to perfect and secure the passage of a supplementary law, in such form as shall unite the academical institutions and the common schools of the State in more intimate and mutually helpful relations, to the end of promoting thereby a more thorough training in the common English, as well as the higher branches of education.

Professor John Stanton Gould, of Cornell University, read a paper on "Agricultural Education," setting forth the popular lack in this direction, and the need of departments in our colleges and universities, for imparting this kind of knowledge.

Regent Warner insisted upon the necessity of a certain amount of

practical hard work and experience before a boy can be advantageously trained in agricultural colleges.

Principal Paddock said that Professor Gould's paper alone had more than repaid him for his journey from Orleans county to Albany. He regarded the subject as one of the greatest practical importance, and thought an elementary text-book on agriculture should be introduced into our schools.

Regent Lewis said he would like to state "What I know about farming," which is, that theory and practice must go together, whether in the profession of law or of agriculture. On this point, Professor Gould and Regent Warner agree entirely with each other, and he himself agrees with both.

Dr. McNaughton, as perhaps the oldest member of the Convocation, said that he knew something about farming, having been intimate in early days with that eminent agriculturist, Jesse Buel, and others of like eminence, and that so-called gentlemen farmers like these are highly useful, just as an architect is useful, though not himself a practical builder.

Dr. King thought it desirable that professors of agriculture should itinerate through the State, and bring such matters as Professor Gould has presented, to the notice of the public generally.

President White, of Cornell University, spoke briefly of what has been accomplished in this direction at that institution. He stated that Mr. Cornell has a great aversion to the term "model farm," and that they actually have two farms for different purposes—one the plain "Scotch farm," the other more ornamental. The great difficulty is in the multitude of counselors, as no two agree in their advice. With reference to the small number who enter this department, he expressed himself as not at all discouraged, and cited at length some facts on this point derived from his observation abroad. He thought Principal Paddock's suggestion as to feasibility of introducing an elementary text-book on agriculture into our schools a good one, and likely to be far more useful than most of the present text-books in geography.

Professor Gould made some statements by way of correcting misapprehensions entertained by some of the Convocation.

The subject was further discussed by Principal Curtiss and Prof. Mears, who deprecated any disposition on the part of the Convocation to glorify the so-called "bread and butter sciences."

The Convocation then adjourned to meet to-morrow morning at nine o'clock.

## SECOND DAY.

WEDNESDAY, NINE O'CLOCK, A. M.

Rev. Patrick F. Dealy, S. J., of the College of St. Francis Xavier, said the Lord's Prayer.

Chancellor Pruyn invited the members of the Convocation to meet at his residence, at the close of the evening session.

Invitations from Professor Hough, Director of the Dudley Observatory, and from the Young Men's Christian Association of this city, to visit the rooms of these institutions respectively, were received and accepted, with thanks.

Dr. Wilson, Chairman of the Executive Committee, reported the following order of exercises for the day, which was approved by the Convocation :

## ORDER OF EXERCISES.

*Wednesday, August 7.*

9:00 A. M.—Opening of the Convocation, and Report of the Executive Committee (continued).

9:15 A. M.—Herbert Spencer's Religion—Professor John W. Mears, D. D., Hamilton College.

10:00 A. M.—Should Study in College be confined to a uniform Curriculum, or should it be made to any extent elective?—President Frederick A. P. Barnard, D. D., LL. D., Columbia College.

11:15 P. M.—The Moral and the Secular in Education—Professor Tayler Lewis, LL. D., L. H. D., Union College.

12:30 P. M.—What shall we do with the Books?—Principal Charles H. Crawford, Almond Academy.

1:15 P. M.—Miscellaneous Business.

1:30 P. M.—Recess.

3:00 P. M.—A method of Integrating the Square Roots of Quadratics—Professor Henry T. Eddy, C. E., Ph. D., Cornell University.

3:15 P. M.—The Co-Relation of Academies and Universities—Principal Wesley C. Ginn, A. M., Ithaca Academy.

3:45 P. M.—Report on the Metric System of Weights and Measures (including President Barnard's Paper, read and referred at the last Convocation).

Professor Charles Davies, LL. D., Fishkill Landing,  
Regent Robert S. Hale, Elizabethtown,  
Professor James B. Thomson, LL. D., New York City, } Committee.

5:15 P. M.—Miscellaneous Business.

5:30 P. M.—Recess.

7:30 P. M.—Report on the Military Roll of Honor.

8:00 P. M.—University Necrology:

Vice-Chancellor Erastus Corning, Albany .....	} <i>Deceased.</i>
Professor Samuel F. B. Morse, LL. D., University of the City of New York.....	
Professor George W. Eaton, D. D., LL. D., Madison University .....	
Professor Edward W. Root, Hamilton College .....	
Trustee William Kelly, University of Rochester.....	
Secretary Samuel B. Woolworth, LL. D., Albany...	} <i>Committee.</i>
Professor Edward North, L. H. D., Hamilton College.....	
Professor Daniel S. Martin, A. M., Rutgers' Female College.....	

8:45 P. M.—Adjournment, to re-assemble at Chancellor Pruyn's residence, according to invitation.

The Convocation resolved to commence the third day's sessions (Thursday) at 8 A. M., and to adjourn at 2 P. M.

Professor John W. Mears, D. D., of Hamilton College, read a paper on "Herbert Spencer's Religion."

After paying a high compliment to the vigor, perspicuity and originality of Herbert Spencer as a thinker and writer, Professor Mears proceeded to examine the argument contained in his *First Principles* upon the nature of the religious idea. Spencer, by his attempt to reconcile religion and science, admits, as Comte does not, the importance and scientific claims of religion as an essential element in human experience. He also leaves the religious idea in a really, though but slightly, better philosophical position than does Sir Wm. Hamilton, who relegates the idea entirely to the field of faith outside of the domain of philosophy.

Prof. Mears then showed that this philosophical idea of Spencer is vague, unpractical, denying all possible relations between the Supreme Being and the soul of man, and scarcely distinguishable from blank Atheism. He combated the position that religion owes its present degree of purity and elevation to the growth of science, compelling it to drop one after another of its dogmas. On the contrary, the dawn of history shows us a pure monotheism already established, not only among the Hebrews, with their sublime literature and their lofty moral code, but also in China, India and Persia, the progress of religious thought being plainly retrograde in these latter countries. What, he asked, had the compulsion of science to do with the formation of these pure ideas in primitive times. A philosophy which deals thus recklessly with the established facts of history is nothing better than a splendid reverie.

But Mr. Spencer, when speaking of religion, means his own notion of religion, and, consciously or unconsciously, sets himself forth as the only true teacher of religion the world ever had. All religions, down to his time, have been largely irreligious. Science has indeed dealt hardly with his religion. It has stripped it of everything except the concession of the want of religion. Religion is simply the blank

admission that there is something utterly inscrutable behind all the phenomena of nature. We instantly become irreligious when we claim to know anything of this something. The ideas of Creation and of First Cause are equally irreligious with the negations of Atheism. Dr. Mears showed the absurdity of calling a power utterly inscrutable, which, by Spencer's own statement, was manifesting itself in all nature, and declared it difficult to see how Spencerism is preferable to Positivism. Positivism ignores the whole problem, but Spencer gives us a philosophy of the unknown and unknowable, which requires as a religious act the total renunciation of all power, possibility or purpose of man to comprehend it, which places in our way an awful, inscrutable sphere, propounding to us life and the universe as mysteries, and threatening to crush us if we attempt to solve them.

President Frederick A. P. Barnard, LL. D., of Columbia College, read a paper on "Elective Studies in Colleges."

The speaker began by saying that this subject had been under discussion for more than half a century without being settled, yet that the condition of the question had been materially changed in the meantime, without affecting as they should the manner of its treatment. The course of study early in the century was much less varied than at present, and was much more largely classical. The change has been no less great in England than in this country, so that at Oxford the degree of Bachelor of Arts may now be obtained without any Latin or Greek after the first year.

The theory of collegiate education has always been that mental discipline, and not the acquisition of knowledge, is its main, if not exclusive, object. On this theory the modern innovations have injured the system. Ought not the principle of election to be admitted, if only to enable the student to correct this in his own case?

The old theory insists that the instruction should be uniform, on the ground that uniformity of mental development should be the invariable aim. The speaker believed the ages of students in the colleges at present to be too much advanced to make this theory any longer admissible. No power of educational culture will produce the same results with different minds. Diversity of attainment is as necessary in the later stages of education as uniformity in the earlier. The average age of college graduates in New England and New York at this time is as high as twenty-one years. A student ought certainly to be competent to participate in the direction of his own education at least a year or two before he becomes a citizen and a voter.

To the objection that when option is allowed students will be tempted to choose the "easy" studies, the speaker replied by saying that the studies are "easy" when they accord with the mental bent which earlier training has developed, without regard to the labor exacted for their prosecution, and are "hard" when they are out of harmony with this. Experience at Columbia College and at Harvard University has proved the truth of this statement.



Much of the opposition made to the introduction of the elective system the speaker believed to arise from considerations purely economical. Under this system the number of exercises which the officers are required to conduct is necessarily increased, perhaps largely. Hence follows the necessity of an increase of the academic staff, and consequently an enlargement of expense. This consideration will prevent universal introduction of the system; but its effect, whenever established, upon the character of the teaching, will necessarily be elevating, and it will induce probably a large post-graduate attendance.

The institutions which adopt the system, or some of them at least, will thus become, with progress of time, more and more assimilated to universities of Continental Europe. We have many projects for the creation in this country of institutions of this high order, upon new and independent foundations. Such projects, if carried out, would involve vast outlays. In the view of the speaker it would be unjust to the existing colleges so to distract the public bounty. Our colleges, if supported by appropriations made to them in the same liberal spirit, will give us, in due time, the real American University.

The subject of President Barnard's paper was discussed by President Samson, who remarked that the paper of President Barnard suggests that the time may have come to draw the line between the College and University. The sphere and office of the Common School, the Academy, the College and the University are severally distinct. The Common School in large cities grows up to the Academy. Many of our Academies aspire too much to be Colleges, and our Colleges all have assumed the double work of the College and the University. The English University, a cluster of Colleges, is the highest type yet developed in our country. The German and French University was attempted in the University of Virginia and elsewhere in the south. But in practice these blended the Academy, the College and the University.

If under the administration of President Barnard, Columbia College, whose immense revenue gives the facility, should be made a university, separated from the college proper, whose curriculum might stop, as does the German gymnasium, with the disciplinary as distinct from improving studies, then there might arise perfect harmony of views as to what studies should be elective, and at what period of education an election of studies might begin.

Principal Gregory remarked that when we ask, should study in college be made to any extent elective? we seem to speak of a novelty which seeks introduction. Had the question been whether young men of nineteen should begin to discriminate between possible studies in favor of those which will contribute most to their future course of life, it will be a question whether they should continue to do as in the past they have done; for at that age, for generations, they have been done with college and have begun their technical and professional studies, with others correlated to them.

The laws of universal individuality and the economic progress of the ages demand it. Exact counterparts in nature are mere observa-

tions of nature, yet individuality is universally neglected if not repressed. The age is one of application and achievement; and the man who is to maintain himself, and prove a blessing to his age, must be master of that in which he is greatest. This, education must find out and develop and perfect.

Prof. D. S. Martin said that there are one or two very important considerations to which he desired to refer. The end of the college, properly so called, is not to make specialists, not to give professional training, but to introduce the opening minds of the young to the wide field of human knowledge, to place in their hands the keys of all intellectual treasures. And though it is not possible to lead students far in any one direction, in the limits of a college course, we can thus make them familiar, in some degree, with the varied forms of culture, and thus render them truly educated. Many men, who in their college course have sacrificed some departments of study for the sake of more "practical" information, are crippled through life for the want of these very forms of knowledge.

Much of the difficulty that we are wont to hear of, between religious and scientific thinkers, arises from the want of knowledge and sympathy between them, because each is unfamiliar with the general principles of the other's modes of thought. How often, too, do we see scientific works full of bad Latin, and, perhaps, worse English? When, therefore, we hear the natural lament of instructors over the scanty and imperfect attention that can be given to any one department in the college course, and listen to the precepts, "*ne multa, sed multum*," and "do one thing only, and do that well," we are really encountering what is, in some important respects, an educational fallacy.

Or should we inquire as to the propriety of allowing one who has achieved a certain degree of advancement hereafter to select a portion of his studies, it is plain that men thus advanced have hitherto thus chosen, and the question is concerning the maintenance of a right long held. The source of the idea that it is a novelty lies in this: that colleges have advanced their curricula until the man of such an age and advancement is still an under-graduate, and the question is, shall that circumstance deprive him of the benefit he previously enjoyed?

If asked concerning the minds of those still young and in a formative state, the answer must be that neither pupil nor parent should exercise the choice as to the studies; but that, having settled their wishes in regard to the boy's future, the wisdom of the teacher should be relied on to choose what studies will best secure the fulfillment of those wishes.

Professor Jewell remarked that Dr. Barnard's paper presses upon every practical teacher a new problem in teaching, especially among undeveloped minds, that is, not to secure mastery of a study, the completion of a course, nor even the production of a merely symmetrical and accomplished scholar. It is this: *To detect and develop*



*the dominant capacity* in every mind, without neglecting other collaterals.

Professor Tayler Lewis, LL. D., L. H. D., of Union College, read a paper on "The Moral and the Secular in Education" (Regent Ottendorfer in the chair).

Professor Martin, of the University of the City of New York, expressed so high an appreciation of the profound and admirable paper of Prof. Lewis; that he was almost unwilling either to add to or to take away from it, yet something of each ought perhaps to be done.

The view that the predominance of spiritual ideas in society would never beget ignorance or squalor, was perhaps liable to serious limitation. The secularist writers have largely sought to show that the excessive cultivation of religious ideas in the early Christian ages had largely tended to show that result. When the monks of Alexandria, enraged at the anti-religious influences which were exerted by the scientific studies of the heathen schools of the city, destroyed the instruments by which Eratosthenes had first measured a degree of the meridian, the world had a significant lesson which we should not hesitate to profit by. The exclusive cultivation of religious idea has, to some serious extent, an influence to overwhelm all study of things of less importance, and to beget a narrowness, a bigotry and a superstition which are at variance with all secular development.

Another point which seems to require correction is the suggestion that if the State should reject all religious teaching, it would be the duty of all good men to reject the State. This, Prof. Martin could not coincide with. He could not entertain the idea of such a renunciation of the State, even in that contingency. He did not propose to abandon the State, all the less because he believed that God had constituted us members of it, and we cannot justly withdraw from the social organization for any unfaithfulness of it to its design. The only other source from which such an idea had been suggested was Herbert Spencer, who advocates the idea that a man may withdraw from society and walk in absolute isolation.

With these two corrections, Prof. Martin most fully and cordially coincided in the instructive suggestions of Prof. Lewis's paper. The ideas of that paper, he said, go very deep. There is not only no right to reject them, but there is no possibility of doing so. They are the sole foundation of society. All government rests on them, and particularly our own republican government. It is founded on the very idea of right, and this, as Prof. Lewis has so lucidly and wisely shown, is essentially religious. Herbert Spencer has endeavored to frame a theory without the admission of the idea of right, by asserting simply the idea of the equality of liberties. Now as a matter of fact, merely, men have not equal liberties. When Spencer's book was written there were four millions of men in our own country who had not the shadow of any liberty. As a fact, it is false; only as a theory of what ought to be is there any truth in it. Otherwise it is a mere fallacy. The sensualist himself cannot do without some

higher idea than this. When Spencer would settle the question of the right of a child to education, against the blind interest, or caprice, of the father who would deprive him of it, he has no resource but to say that it is perhaps the will of God that the child shall be educated. The will of God! What is the will of God in the eyes of one who has laboriously been teaching the world that God is unknowable?

Principal Charles H. Crawford, of Almond Academy, read a brief paper entitled "What shall we do with the Books?" the scope of which is partially indicated by the concluding paragraph, as follows:

My answer, then, to the question, "What shall we do with the Books?" is this: Require pupils to use books in school as they will need to use them after leaving school, that they may learn how to use them. I am aware that during a term's study in this way, the student will not have learned so many facts concerning the subject in hand as he would by memorizing a text-book, but he will have gained such ability to acquire the facts he will need to know in his after life as will more than compensate for this apparent loss. This loss need not be regretted; for not the largest knowledge of the contents of books, but the greatest ability to draw from them, in every emergency, just the knowledge needed, is the best "book learning."

The subject of Principal Crawford's paper was discussed by Principal Paddock, who urged, in accordance with the spirit of the paper, that we should not forego the immense advantage of the art of printing in the matter of educational economy.

Principal Clarke thought that it would be a great advantage to the cause of education were a large part of the books extant destroyed. Much discrimination should be shown in the use of books. These books should be largely adapted to the purposes of general reading, though thoroughly exact in all their definitions and statements, like Prof. Davies' own works. These important matters should be thoroughly committed to memory.

Chancellor Pruyn alluded to the desirableness, in itself considered, of some official supervision in the matter of text-books, but for various reasons it has never been deemed proper in this State, in view of existing circumstances, to take any action in this direction.

Principal Morehouse, of Albion Academy, said, in answer to the question what shall we do with the books: Read the good books and discourage the bad books. By reading, he said, he meant that the pupil should obtain precisely the same view the author had when writing the book. To get the best view of a picture, we must occupy the position occupied by the artist when producing his work. Thus pupils should learn to use books as they need to use them in after life. Besides, formulas and rules should be thoroughly memorized.

Principal Curtiss, of Sodus Academy, was pleased to find the members of the Convocation so unanimous in the opinion that text-books should be used by students, and thought it purely egotistical to pretend that we can teach so much better than books; and that if we could so teach, we could write books that would be invaluable. But the truth is, those who pretend to know so much are generally pedants that know not how to teach the books already published.

Under the head of miscellaneous business, Dr. Wilson called up the resolution accompanying the report submitted last evening by President Allen, relative to the increase of the Literature Fund, which was unanimously adopted.

In this connection, Principal King, of the Fort Edward Collegiate Institute, desired to add a word by way of emphasizing the importance of the work of the committee just ordered. He had had the pleasure, as one of the former committee of the Convocation, of being present at a joint meeting of the committees of education of the Senate and Assembly, and he was delighted to find the gentlemen then present to be men of broad and liberal views, who entered with great interest into the conversations—rather than debates—in which the welfare of the academies was canvassed, and the relation of that welfare to the educational system of the State. He had found the committee prepared to grant more than they scarcely dared to ask. In a like spirit of enlightened liberality, the Legislature had granted the proposed increase of the Literature Fund, and the Governor had approved the action. We were coming up this summer to enjoy our educational Jerusalem, at this Convocation, filled with gratitude and hope. We were counting upon a new and grand departure of prosperity that was to tell upon the welfare of the whole State, when we were astonished to find some gentlemen, themselves engaged in the educational work, announcing themselves, in public conventions, as opposed to this timely aid to the academies, and as determined to apply to the Legislature for a repeal of the act by which it was given.

He could not find language to express his annoyance and disgust, when, at the late Teachers' Association, at Saratoga, he had heard a gentleman read a set of resolutions, expressed with careful malice, to antagonize the academies in this matter. This striking at academic education in the house of its friends, he deemed both indecent and uncourteous. How many persons shared that gentleman's notions he did not know. He had learned that the gentleman succeeded, mainly by the votes of a score or two of young ladies, in passing his ugly resolutions. We have fair warning, therefore, of a contest. Let us meet it manfully. He would especially bespeak the kind co-operation of those college presidents and professors who are present, in securing just protection from the Legislature. He begged to remind these gentlemen how vitally the prosperity of the academies stands related to the prosperity of the colleges to which they are the feeders.

The munificent patrons of colleges may build ever so grand a distributing reservoir, but if the Croton fails them, of what use

will the reservoir be? Take care that the supply of students does not fail.

See to it that the bubbling springs from the hill-sides, and "the complacent brooks that make the meadows green," are not suffered to languish for want of the flattering dews of your bounty, and then the reservoirs will give forth healing streams in abundance.

Who so well as academic teachers can discern in the child and the youth a divinely organized soul, ready to expand under liberal training, and give that young mind a bias which shall put the lad to preparing for college? Take care of the academies and the colleges will flourish. Withhold this timely bounty and you drive many of them to the wall. They will die.

Recess until three o'clock P. M.

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#### AFTERNOON SESSION—THREE O'CLOCK.

The Convocation was called to order by the Chairman of the Executive Committee (Dr. Wilson), who presided during the session.

Professor Henry T. Eddy, C. E., Ph. D., of Cornell University, read a paper on "A new method of Integrating the Square Roots of Quadratics," which he illustrated on the black-board.

Principal Wesley C. Ginn, A. M., of Ithaca Academy, read a paper on "The Co-Relation of Academies and Universities."

The following is an outline of Principal Ginn's paper:

One of the essentials to the success of our academic system is that all the parts shall bear a natural relation to each other; that the lower grades shall be tributary to the higher, while the higher shall in no manner encroach upon the prerogatives of the lower. The fact that this relation has not been sustained by all the parts of our system may account for the falling off in the interest in liberal education; that liberal education has not kept pace with the wealth, the population and the opportunities of education in the State.

In New England we find Yale and Harvard, though not yet reaching to the full status of the true university, yet making progress in that direction, raising from year to year their standard of admission both to their regular and scientific courses, and demanding better work and fuller preparation on the part of their candidates. As a consequence the public high schools and other preparatory academic schools in those States have answered to the demand by broadening their courses and by employing teachers of better talent and of higher attainments. Here we have a complete system, beginning with the graded school system, supplemented to some extent by the private seminaries of learning, and terminating in the university and college.

In both of the above named institutions, a special effort has been made to raise the standard of admission to the scientific course to a level with the requirements of the classical course. Though differ-

ing in kind, the quality and amount of preparation are nearly alike in all the departments.

The University of Michigan, the best known of our western colleges, has entered earnestly upon the same work, and, in her Prospectus for 1873, demands of candidates for the scientific courses for that year a preparation in French and other studies, equal in amount to the classical preparation. There, too, the public school system is organized to meet these demands, just so far as the circumstances of the population will allow. How is it in our own State? Are our universities advancing their standards of admission to that degree that will bear a favorable comparison with the institutions just mentioned?

We have one university, with a history of only four years' duration, which, in that short space of time, has attained to a national reputation, and has gathered within her halls 600 students, all of them ranking as university students, yet the vast majority of them admitted with a preparation in only the common English branches, and algebra to quadratics.

While admiring the generosity which founded it and the wisdom which would open a class of industrial, or polytechnic schools, for the better preparation of our young men for the farm, mechanic arts and various industrial pursuits, we protest, in the name of the academies, against an institution bearing the honorable name of university—a name synonymous with the richest culture and broadest and deepest scholarship—entering into competition with the academies and union high schools, in providing instruction in those branches which have been universally conceded as preparatory and belonging exclusively to the academy.

It is unfair toward academies, in that their pupils are induced to leave them before the work of preparation is complete, and the patronage so much needed at this stage of their history is withdrawn. Liberal education is robbed of its incentive, from the fact that students are encouraged to leave their preparation undone for the premature offer of university honors. A spirit of unrest is introduced among academy students, and the headlong spirit of the age is stimulated instead of retarded.

Standard of admission being low, graduation must necessarily be low; consequently the character of the university must be degraded. Prosperity of other colleges is imperiled by this unnatural competition.

All institutions bearing the name of college should demand of their students the same degree of discipline, that all college diplomas may represent the same value in literary society.

The colleges and universities should at once advance their standard, and continue to do so from year to year, till they are universities in fact as in name; and then a fair field will be open to the academies. Then will the two classes of institutions assist each other, and combine to stimulate in the young a desire for liberal culture. Then will this State—the Empire State, in wealth, in commerce, in population and in political power—become also the Empire State in letters.



The subject of Principal Ginn's paper was discussed at some length by Professor John Stanton Gould, defending the policy of Cornell University, with reference to some of the views advanced in the paper just read.

A "Supplementary Report of the Committee on Coins, Weights and Measures," submitted by Professor Charles Davies, LL. D., was read at his request, on account of ill health, by Regent Robert S. Hale, LL. D., a member of the same committee.

A minority report on the same subject was submitted by Professor James B. Thomson, LL. D. The following preamble and resolutions were appended to this report:

Whereas, in order to the facilitation of intercourse between nations, whether the same be commercial, postal, diplomatic, literary or social, it is eminently desirable that the quantities of all exchangeable commodities, and all quantities whatever which there may be occasion to mention in communications, written or oral, should be expressed in the denominations of some common and universally accepted system of weights and measures;

And, whereas, the metrological system of which the basic unit of length, called the meter, was definitely and permanently fixed by the International Scientific Commission, assembled for that purpose in the city of Paris in the year 1799, has been adopted and established by law as the exclusive system, according to which quantities are to be legally expressed in the transaction of business by nearly every people having intimate and extensive commercial relations with the United States, except the British;

And, whereas, indications too significant to be disregarded point to the probability that the same system will at no very distant day be established by law in the British islands, as it has been already in their vast East Indian dependencies;

And, whereas, it becomes every nation claiming to be enlightened to coöperate with sister nations in the furtherance of a reform of so signal importance, and so pregnant with benefits for the whole human race; therefore,

*Resolved*, As the sense of this Convocation, that effectual measures ought to be taken, with the least possible delay, by the Congress of the United States, by the several State Legislatures, and by educational institutions throughout the country, to acquaint the people of the United States, and all the people, with the nature and merits of the metric system of weights and measures, with the extent to which the said system has been already adopted by law and brought into actual use, and with its claims to be universally accepted and made the metrological system of the world; and to this end,

That laws should be made by Congress providing that, in the levying of impost duties upon foreign goods entered in our custom-houses, quantities shall be stated in the denominations of the in the system.

That the tariff of postal charges levied upon matter transmitted

through the mails of the United States should be revised and reconstructed upon a plan in which the limit of the weight of matter transmissible under each postal charge shall be expressed in metric denomination.

That a law should be enacted by Congress requiring that in the returns of the decennial census of the United States, in documents issued by the Bureau of Statistics at Washington, and in all papers proceeding from the executive department of the federal government, where quantities are mentioned, such quantity shall be stated not only in the denominations of weight and measure now in legal use, but also in equivalent metric values; and finally,

That the Legislatures of the several States should pass laws requiring that in all universities, colleges, academies, normal schools and common schools established by their authority, instruction in the nature and use of metric system shall be given, and that the principles of the said system shall be taught every pupil.

*Resolved, further,* That a copy of the foregoing preamble and resolutions, duly attested and signed by the proper officers of this Convocation, be transmitted to the President of the United States, with a request that the same be communicated to Congress; and that copies, similarly attested and signed, be sent to the governors of the several States of the Union, with the request that they be laid before their respective Legislatures.

Recess until 7:30 P. M.

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#### EVENING SESSION—SEVEN AND ONE-HALF O'CLOCK.

The chairman of the Committee on the Military Roll of Honor (Regent Wetmore) being detained by illness from this meeting of the Convocation, the subject was recommitted for the ensuing year, the Executive Committee being authorized to print any material which may meanwhile be furnished.

The subject of University Necrology, on account of the detention of the chairman of the standing committee on that subject, Secretary Woolworth, by illness, was recommitted to that committee, with power to perfect and publish the material in their hands.

Assistant Secretary Pratt, by direction of the Chancellor, read an extract from the minutes of the Board of Regents, to the effect that at a meeting of the Board held this day, in consideration of eminent services in the cause of education, it had been unanimously

*Resolved,* That the honorary degree of Doctor of Philosophy be conferred on Joseph Elisha King, D. D., Principal of Fort Edward Collegiate Institute, and that the ceremony be performed in the presence of the University Convocation.

The Chancellor appointed Drs. Martin and Clarke to escort Dr.

King to the front of the desk, and thereupon formally conferred the aforesaid degree.

The Secretary also read a similar decree that the honorary degree of Doctor in Literature be conferred upon Frederick Augustus Porter Barnard, S. T. D., LL. D., President of Columbia College.

The Chancellor appointed Regents Hale and Leavenworth to conduct President Barnard to the front of the desk, and the said honorary degree was conferred in due form.

The Chancellor stated that Regent Erastus C. Benedict, LL. D., had this day been duly elected Vice-Chancellor of the Board in place of Erastus Corning, deceased, and called upon the Vice-Chancellor elect to occupy the chair during the remainder of the evening.

The following resolution was adopted, on motion of Regent Hale:

*Resolved*, That the time assigned by the Executive Committee to the discussion of the report of the Committee on the Metric System of Weights and Measures being inadequate to the full consideration of that subject, the report lie upon the table until the next annual meeting of the Convocation, and that the report of the Committee and the minority report be both printed.

On motion of Dr. King:

*Resolved*, By the University Convocation, that we gratefully recognize the action of the Legislature and Executive of the State, by which academies and academic departments of union schools are to enjoy a greatly needed increase of the Literature Fund to be annually distributed among them by the Regents, as eminently just and wise, and that we deem the prosperity of these academic institutions vitally and inseparably related, both to the wholesome working of our public free schools, to which they must supply many of the teachers, and to the welfare of the colleges and universities of the State, of which they are the natural and almost the sole feeders.

*Resolved*, That the resolution be communicated by the officers of the Convocation to the Governor and to the Senate and Assembly.

On motion of Dr. Clarke:

*Resolved*, That the Regents of the University are hereby requested by this Convocation to publish, without unreasonable delay, the proceedings of this meeting, and also the proceedings of the last annual session of the Convocation, if those proceedings are not already in print, and that they be distributed to the members of the Convocation at as early a day as practicable.

The programme for the evening having been disposed of, the discussion of President Barnard's paper on Elective Studies in College was taken up, and President White, by special request, gave his views on this subject.



President White said, in substance, that he had greatly admired the paper of Dr. Barnard. It had occurred to him, while agreeing with much that had been so well said, that more use might be made of optional courses, to the advantage of many students. As a compromise he had thought favorably of what might be called a bifurcated course; to have fixed courses up to a certain point, and then to allow the student some choice in his subsequent studies. His experience at Michigan University taught him that we can safely leave the students of colleges a much greater liberty of choice than has been thought safe. At the ages of 17, 18 and 19, young men are generally called upon to make grave decisions in life. Now, as to college courses, why shall not young men, conferring with parents and professors, decide what course of study they had better take?

The result with fixed courses in the old colleges has not been so remarkably or uniformly successful as to justify such prejudices against trying modified courses. The scientific courses of Yale and elsewhere have been a benefit to the regular courses. Fewer young men leave them. The question of fixed or optional courses cannot be determined by theorizing. The test of practice is required. Formerly, scientific students were looked down upon, but not so of late. We shall soon know, from the experience of existing institutions, what is the comparative benefit of the two systems. The problem is getting a solution at Cornell. Some students who reject Greek and Latin pursue German with great thoroughness. On the opening of the Cornell University, when 200 or 300 young men passed around him and asked, what shall we do? he was greatly embarrassed. In a short time, however, young men settled into courses for which they were prepared. There is danger of young men whiffling from one to another. Common sense is needed in managing, and a remarkable firmness. The German university system was tried first at Michigan University. There any student can take any three studies he chooses. Each student must take three. That is our rule at Cornell. His experience is that more flexibility, more liberty is an advantage. In conclusion he would urge one point. Nothing is worse for classical studies than to fasten twenty young men who love them with twenty who do not. With a course of options you can allow these latter to change to their advantage as well as greatly to the benefit of the better classical students. In this way the Latin and Greek classes can be pushed to higher grades than they could otherwise attain.

The subject was further discussed by Dr. Lambert, of New York city, until the hour of adjournment arrived, when the members repaired to the Chancellor's residence, in accordance with his invitation.

## THIRD DAY.

THURSDAY—EIGHT O'CLOCK, A. M.

The Convocation was called to order at eight o'clock by Vice-Chancellor Benedict, and was opened with the usual devotional services conducted by the Rev. Dr. Wilson.

The concluding report of the Executive Committee, including the order of exercises for the day, was submitted and adopted as follows:

## ORDER OF EXERCISES.

8:00 A. M.—Opening of the Convocation, and concluding Report of the Executive Committee.

8:30 A. M.—The Relations of the Schools of the State—Principal Oliver Morehouse, A. M., Albion Academy.

9:15 A. M.—Report on (1.) A Course of English Studies appropriate to Academies and High Schools; (2.) Compensation of Teachers; (3.) Preliminary Academic Examination.

Ex-Principal Jonathan Tenney, A. M., Owego Free Academy.....	} <i>Committee.</i>
Professor Le Roy C. Cooley, Ph. D., State Normal School, Albany.....	
Principal Abraham Mattice, A. M., Hudson Academy.....	

## COLLEGE SECTION—SENATE CHAMBER.

10:00 A. M.—Honorary Degrees (including Warden Fairbairn's individual Report made at the last Convocation and referred to the Committee).

President Andrew D. White, LL. D., Cornell University.....	} <i>Committee.</i>
Principal Joseph E. King, D. D., Fort Edward Collegiate Institute.....	
Warden Robert R. Fairbairn, D. D., St. Ste- phen's College.....	

## ACADEMY SECTION.

10:00 A. M.—School Apparatus—Principal Solomon Sias, A. M., New York Conference Seminary.

10:30 A. M.—Academies and their Work—Principal James M. Sprague, New Berlin Academy.

## JOINT SESSION.

11:15 A. M.—Annals of Public Education in the State of New York (*continued*)—Assistant Secretary Daniel J. Pratt, A. M., Albany.

11:45 A. M.—Miscellaneous Business.

2:00 P. M.—Final adjournment.

Principal Oliver Morehouse, A. M., of Albion Academy, read a paper on "The Relations of the Schools of the State" urging, among other things, the importance of academies as a class in our educational system.

Principal Morehouse's paper led to an animated discussion, opened by Professor Wilson, who stated that though he had small acquaintance with normal schools, his impression was decidedly in favor of academies as places of education. He thought that the spirit of those that had been educated in the academies much superior to those that had been trained in the normal schools. He therefore sympathized most heartily with the university, in favor of the academies, though no enemy to the normal schools.

With regard to the Cornell University, he wished to correct an impression which may have possibly been made yesterday—that it was interfering with the academies by doing this work—taking young men before they have been completely through the academies. He said Cornell had no design of doing any such thing. He did not believe they were doing so. Nothing was further from their intention.

He remarked, also, that in Cornell, most of those who entered as optional students soon found their way through some one or other of the courses, or dropped out of the university altogether.

Principal Mattice said:

I rise to heartily indorse the sentiments of Professor Wilson with reference to results of instruction in normal schools. There is in the history of almost every young man a sophomore period when he is wiser than he will ever be again. This period sometimes is reached before entering college, but most usually is found in the sophomore class in college, and there is no place like the two subsequent years in college to take this conceit out of him. Now, the misfortune of our normal schools, never so well conducted, is that they graduate the majority of their pupils at this period of life, and it requires many years and many hard knocks to get these graduates safely over this period.

Regent Lewis remarked: There is a germ of thought contained in the excellent paper read which is worthy of being elaborated, and it is to be hoped that it may hereafter be the subject of a distinct paper by some of the distinguished scholars of this Convocation. It is that which points to free education in the higher institutions of the State, and that its liberality should be extended to the academy and college as well as the primary school. Thirty years ago if the question had been asked me if there would be a time when there would be a system of free common schools in this State, it would have been answered in the affirmative, but with the qualification that it would not be in

my generation, and yet for years it has been in the full tide of practical and successful working.

I held to the maxim that "the rulers of a State should educate the children of a State." I hold to it still, but in view of the past I would now modify it so that the principle should be: "A State should educate the youth of a State," and this as well in the higher branches of learning as those taught in the primary school.

In a country like ours, why should not the children of the poor enjoy the same advantages as the children of the rich? Why should they not be fitted by the State for its service? Why should there not be a school of preparation for the civil service of government as well as its military and naval service, not by a separate school of learning, but by opening the doors of our colleges.

In this respect, our civilization is far behind that of the Chinese, where such a system has been for a long time in practical operation. The effect of such action would be the most effectual mode of accomplishing the object so much desired, and so eagerly sought for in our days, that is, civil service reform.

If thirty years have brought about so much for primary schools, why may not another thirty years achieve a result so desirable.

There is not time now, even had I a detailed plan, to present and discuss it. The object is a feasible one, and though the doors may not at once be open to all, yet scholarships might be established, and thus furnish ample endowments for the collegiate institutions.

These thoughts are thrown out as deserving serious consideration by the thoughtful friends of education, and it is hoped that they will not only receive such attention, but pave the way to practical action, so that education, in all its departments, shall be free.

Principal Albert Wells, of Peeksville Academy, said that, however we may differ as to the details of a system of legislative aid to our academies, there is doubtless great unanimity in favor of the principle. And if the academies, for the last thirty years or more, have received but the petty dividend of the uniform appropriation of \$40,000 a year, it is owing to their own inactivity in the matter.

While the Legislature has been besieged by the agents of every other interest, and millions of the people's money have been granted to corporate interests and national advancement, the friends of the academies have been too modest or too indifferent to their own welfare to engage in a concerted effort for their benefit.

We have seen what a little united and persistent effort has been able to effect. For several years I have looked with great interest on the growing attention to this subject. We can certainly put out of question the personal interest of those having charge of the academies. We have the most cogent reasons, based on the general good, to urge upon the Legislature; and I cannot doubt that the moral power and influence of the liberal educators of the State are fully adequate to every desired result.

But we must not rest satisfied with what has been done. If we remain silent, it is more than probable that the Legislature will

reverse its recent action, and cut down future appropriations to the income of the old Literature Fund, which costs the people, by taxation, nothing. Let every trustee, principal and professor in our academies make common cause in this matter, and prosecute it with persistent and untiring vigor.

Dr. King said, from a line of remarks indulged in by two of the speakers who have criticised rather freely the results of normal school instruction in the State, he apprehended that it may be inferred that this Convocation intends to antagonize the normal schools. The normal schools are not on trial before this Convocation, if they are on trial before the people. We know the instructors in these schools. They are able and worthy men, our brethren in the work of education. If they are to be arraigned, let them have notice, and they can speak for themselves.

It is premature to judge of the products of these new institutions before they are fairly under way. Give them reasonable time, and wisdom will be justified of her children. For himself, he welcomed those co-laborers heartily. With a little needed legislation to hold them to their legitimate work of qualifying their pupils to teach in the public schools, all these normal schools are greatly needed. This Convocation will give them "God speed" in their important work.

The committee appointed by the last Convocation to report on certain specified topics relative to academies, reported in part, through Principal Mattice, as follows:

#### PRELIMINARY ACADEMIC EXAMINATION—REPORT OF COMMITTEE.

Experience has demonstrated the wisdom of the preliminary examination instituted by the Regents.

We believe this examination has done more than any other one thing to promote *thoroughness* in our academies and high schools. While it serves as a help to the judicious teacher and a stimulus to the earnest pupil, this examination is at the same time a touchstone which tries the work of both.

Found to be of so much value in preliminary studies, we earnestly recommend the adoption, at an early day, of a similar system of examination in the higher branches of study, which are, or ought to be, pursued in all our academies and high schools.

With reference to the preliminary examination so wisely conceived and so efficiently carried out, we have but two suggestions to make viz.:

1. That the number of questions on each branch submitted be not less than fifty nor more than one hundred.

2. That in the distribution of the Literature Fund to the institutions under the care of the Regents, some account be made of those who have passed the examination in some of the branches required.

In closing this report we deem it only just to say that, in the opinion of your committee, the eminent success and the beneficial results which have hitherto attended this examination are largely due

to the earnest, enthusiastic labors of our worthy and able Secretary, and his no less worthy and able assistant.

All of which is respectfully submitted.

JONATHAN TENNEY.  
LE ROY C. COOLEY.  
ABRAHAM MATTICE.

The above report, as thus far made, was accepted, and the committee was continued.

The foregoing report served to introduce an extended and able discussion by Drs. Clarke, King, Steele and Jones, Principals Flack, Robb, Mattice, Morehouse, Paddock, Crawford and Cavert, Presidents Allen, White and Van Rensselaer, Professors Wilson and Gould, Regents Benedict and Warner, Secretaries Woolworth and Pratt, and School Commissioner Sturtevant. Almost all of these reiterated, and in the most emphatic manner, the estimate of the report as to the value of this system of examinations, and no word of objection, or scarcely of criticism, with regard to its present workings, was uttered. The introduction of this system, by the Regents, was characterized as marking a great era in educational progress (Presidents White, Van Rensselaer and others); as one that ought to be extended to the examination of all common-school teachers in the State (President Allen and others); and to other branches than those at present included (arithmetic, geography, grammar and spelling), especially United States history, and some of the higher branches (Dr. Clarke, Professor Gould and Principal Flack).

The matured sentiment of the Convocation was further declared by the unanimous adoption of the following resolution, introduced by Dr. Clarke :

*Resolved*, That the presidents and professors of the universities and colleges, and the principals and teachers of the academies of this State, here assembled, do, as public educators, recognize with gratitude the wisdom of the Regents of the University in inaugurating the system of preliminary academic examinations, which has not only raised the standard of instruction in these institutions, but which has already been productive of great good to the entire educational interests of the State.

As to the first recommendation of the report, it was remarked by Principal Flack that he had incidentally learned that it is proposed at the office of the Regents to prepare a review series of questions in geography, say one thousand in number, of suitable character for use in written examinations, and to select questions from this series, by lot or otherwise, for use at each preliminary academic examination,



allowing such series to be freely used beforehand in all the schools. He thought this a feature worthy of immediate adoption, and one which this Convocation should urge with all earnestness and unanimity.

Principal Robb thought this would be as vicious as a college "pony," or as the practice of special "cramming" for examination, and that it would utterly vitiate the results of the system.

Dr. King thought Principal Robb decidedly in error on this point.

President White declared such a series of questions, if judiciously prepared, no "pony" at all. A "pony" is a translation, a mere substitute for the thing to be learned; whereas the series of questions under consideration embodies the identical subject-matter to be learned, and the knowledge, when so acquired, would be of the most valuable character. As to cramming, there are times and seasons when nothing else is so important and necessary. Your lawyer, who is charged with an important case, must cram to the utmost; so must your civil, and especially your military engineer, when a crisis impends. Where is the harm, then, in the use of the cramming process by students who are soon to become lawyers, engineers, etc.

Principal Mattice offered the following resolution, which was adopted:

*Resolved*, That this Convocation recommend the preparation, by the Regents, of a manual of questions on the subject of arithmetic, grammar, geography, and history of the United States, from which selections shall be made for the preliminary academic examination.

During the discussion of the importance of history, Professor Gould recommended that great facts of human progress, rather than merely statistical items, should be made prominent in the proposed examination on this branch, and in this connection he made an allusion to the religious extravagancies entertained in the days of Michael Wigglesworth, in contrast with the tenets of our day, as a prominent illustration of the point at which he was aiming.

Rev. Dr. Jones said:

Mr. Chancellor, I will not follow the Professor who has just taken his seat in his remarks upon the changes which have taken place in religious belief, further than most decidedly to dissent from his views, and to assert that the various confessions of faith adopted by evangelical denominations, and to which the clergymen of those denominations have solemnly given their assent, and that that good old book, so eloquently referred to by Prof. Tayler Lewis, yesterday, are a standing refutation of his views. But as to the question of examination, Mr. Chancellor, it is my decided conviction, after a night's reflection, that a series of questions presented to pupils *before* their examination, and made a test of their knowledge, will fail to develop that thorough mastery of a subject which it should be our aim to cause each pupil to obtain. Is there not reason to fear that our pupils will

satisfy themselves with a bare knowledge of answers to these questions, and will confine their efforts to the preparation of such answers rather than to the understanding of the whole subject? I am constrained to deprecate this plan, fearful that it will prove a step backward rather than forward. Is it not to be feared that some teachers will use all their efforts simply in cramming the minds of their pupils with a definite number of answers rather than in training them to look upon all sides of a subject and thoroughly to master it? Allow me, then, to close by offering the following resolution:

*Resolved*, That the Regents be requested to print the questions they may prepare and send them to the principals of academies, and that a place be assigned at the next Convocation for remarks upon the use of such lists.

This resolution was, after much discussion, adopted by a small majority.

Principal Flack, as a clergyman, was of opinion that as teachers we ought not to be afraid of the progress of theological ideas in the matter referred to by his friend, Professor Gould, especially in view of the fact that the latter represents the once fiercely persecuted Society of Friends.

On the subject of extending the examination to the higher branches, Secretary Woolworth referred to the existing statute, which authorises the Regents to enforce the examination only in case of the elementary branches. It may be desirable that further legislation be secured in this matter.

In accordance with the programme, the Convocation divided into college and academy sections.

#### COLLEGE SECTION.

The college section met in the Senate chamber, Vice-Chancellor Benedict in the chair.

Warden Fairbairn's individual report on honorary degrees, submitted last year, and laid over for consideration, was called up.

President White, as chairman of the committee on this subject, discussed the report at some length; after which, it was

*Resolved*, That copies of the report of Warden Fairbairn be distributed to the college officers throughout the State, and that the further consideration of the subject be postponed to the next Convocation; also,

*Resolved*, That a list of the attendance of the colleges at this time be also sent, and that the colleges be requested to appoint representatives to the annual meetings of the Convocation, with an expression of opinion on the subject under consideration.

The college section then adjourned.



## ACADEMY SECTION.

The chair was occupied by Regent Warner.

Principal Solomon Sias, A. M., of the New York Conference Seminary, read a paper on "School Apparatus," of which the following is an abstract:

Apparatus to illustrate the common principles is needed for our schools, not to be put in show cases for exhibition, but to be used daily in class experimenting. School charts in geography, philosophy, astronomy, are not enough; the teacher should be a live man, working every day to illustrate and fix the statements of his textbooks, and to do this in the best manner needs apparatus—not so much the costly articles as those the pupil can use for himself in the class. With all their usefulness, our manufacturers do not make the right kind of articles for illustration of the common principles. It is not their fault; teachers should devise such as they find useful, and give their patterns to the manufacturer, and the manufacturer should then produce them in good, plain and substantial style.

Principal James M. Sprague, of New Berlin Academy, read a paper on "Academies and their Work."

The paper was designed to set forth the multiplicity of duties which surround every academy, and to define the important relation of these institutions to all others. It also showed the necessity of a more earnest support of them on the part of all those interested in supplying our common schools with qualified teachers.

The subject of Principal Sias' paper was discussed by Principal Gregory, who referred, among other things, to an effective *cane* illustration employed on a certain occasion by Professor Mitchell, and to certain simple but highly useful maps, etc.

The chair (Regent Warner) stated, as a miscellaneous item bearing upon Dr. King's reference to the commissioners' convention at Rochester in June last, that he was accidentally present when it was resolved to abate the nuisance complained of (the Board of Regents); and that the said action was taken without debate, and, so far as he could discover, without assigning any cause therefor. If this is really to be done, he desired that some good and sufficient reason be stated by the complainants in the action.

School Commissioner Sturdevant, of Madison county, being present, stated that he was not in attendance at the time referred to; but had he been, and had he felt disposed to commit himself in any way, he should certainly have opposed the resolution then adopted.

## JOINT SESSION.

Vice-Chancellor Benedict, as chairman of the college section, reported the action taken, as stated above.

Assistant Secretary Pratt moved that a paper on honorary degrees, by Vice-Chancellor Benedict, which he modestly refrained from presenting at the last Convocation, be printed for the use of the Convocation, which was agreed to, and with this amendment, the proceedings of the college section were adopted by the Convocation.

Assistant Secretary Pratt read a portion of a further chapter of his "Annals of Public Education in the State of New York," and the whole chapter was ordered to be included in the published proceedings of the Convocation.

Dr. Steele made a statement in regard to a proposed State educational journal, and offered the following resolution, which was unanimously adopted :

*Resolved*, That this Convocation approve the action of the State Teachers' Association in the establishment of the New York Educational Monthly, and hereby pledge to it their cordial support.

The following resolutions were adopted, on motion of President Van Rensselaer :

*Resolved*, That the thanks of this Convocation be presented to the Chancellor, Secretary and Assistant Secretary for their unremitting and valuable services in conducting its proceedings.

*Resolved*, That our thanks are also due to the Chancellor of the University for his courtesy and hospitality to the members of this Convocation.

The Chancellor and the Secretary severally acknowledged the courtesy extended to the officers by this resolution.

Vice-Chancellor Benedict alluded to the leave of absence for a foreign tour granted to the Secretary by the Board of Regents, especially in view of his long and valuable services and his present need of relaxation.

The following resolution was unanimously adopted, on motion of Principal Bingham, of Canisteo Academy :

*Resolved*, That the thanks of the Convocation are due to the several railroad and steamboat companies which have generously reduced their rates of fare for the benefit of the members in attendance, and that a copy of this resolution be communicated, by the Assistant Secretary, to the several officers through whom these favors were granted.

The following is a list of the several passenger lines to which the foregoing resolution applies :

Hudson River Day Line of Steamers.

Citizens' Steamboat Company, of Troy.

Champlain Transportation Company.

Delaware and Hudson Canal Co.: (Rensselaer and Saratoga and Albany and Susquehanna Railroad Departments.)

New York and Oswego Midland Railroad.

Utica and Black River Railroad.

Boston and Albany Railroad.

Vermont Central Railroad.

On motion of Principal Bingham, the thanks of the Convocation were also tendered to *The Argus* and *The Evening Journal*, of this city, for the use of their columns in publishing full reports of the proceedings of this Convocation.

The Chancellor announced, in regard to the committee of fifteen on the matter of the increase of the Literature Fund, that it is proposed to continue the committee of ten raised last year, with the exception of Principal Barr, who is about to leave the State, as part of such new committee; and that the other six members would be named thereafter.

The committee, as subsequently completed, consists of the following persons:

Jonathan Allen, A. M., Principal of Acad. Dept., and President of Alfred University.

Maunsell Van Rensselaer, D. D., President of Hobart College.

Joseph E. King, D. D., Ph. D., Principal of Fort Edward Collegiate Institute.

Albert Wells, A. M., Principal of Peekskill Academy.

Benjamin N. Martin, D. D., L. H. D., Professor in the University of the City of New York.

James S. Gardner, A. M., Ph. D., Principal of Whitestown Seminary.

Gilbert B. Manley, A. M., Principal of Cortland Academy.

Albert B. Watkins, A. M., Principal of Hungerford Collegiate Institute.

Noah T. Clarke, A. M., Ph. D., Principal of Canandaigua Academy.

John Jones, A. M., D. D., Principal of Geneseo Academy.

George W. Briggs, A. M., Principal of Delaware Literary Institute.

Samuel G. Love, A. M., Principal of Jamestown Union School and Coll. Institute.

J. Dorman Steele, A. M., Ph. D., Principal of Elmira Free Academy.

Alonzo Flack, A. M., Principal of Claverack Academy and H. R. Institute.

Miner H. Paddock, A. M., Principal of Medina Free Academy.

The Chancellor also appointed the following persons as the Executive Committee for the ensuing year :

Professor William D. Wilson, D. D., LL. D., L. H. D., Cornell University.

Professor Cornelius M. O'Leary, A. M., M. D., Ph. D., Manhattan College.

Professor Henry L. Harter, A. M., Potsdam Normal School.

Principal Erastus F. Bullard, A. M., Keeseville Academy.

Principal John C. Gallup, A. M., Clinton Grammar School.

Principal Abraham Mattice, A. M., Hudson Academy.

Principal Alexander J. Robb, A. M., Waterford Union School.

The standing committee on University Necrology was continued for the ensuing year, viz.:

Secretary Samuel B. Woolworth, LL. D., Albany.

Professor Edward North, L. H. D., Hamilton College.

Professor Daniel S. Martin, A. M., Rutgers' Female College.

After a brief concluding address by Chancellor Pruyn, he declared the Convocation duly adjourned, to meet on the first Tuesday of August, 1873, and the benediction was pronounced by Rev. Dr. Fairbairn.

## MEMBERS OF THE CONVOCATION IN ATTENDANCE.

## BOARD OF REGENTS.

John V. L. Pruyn, LL. D., Chancellor; Erastus C. Benedict, LL. D., Vice-Chancellor; Abram B. Weaver, Superintendent of Public Instruction; Robert S. Hale, LL. D., Elizabethtown; Elias W. Leavenworth, LL. D., Syracuse; George R. Perkins, LL. D., Utica; Francis Kernan, LL. D., Utica; Oswald Ottendorfer, New York city; John L. Lewis, Penn Yan; Horatio G. Warner, LL. D., Rochester; Henry R. Pierson, Albany; Samuel B. Woolworth, LL. D., Secretary; Daniel J. Pratt, Assistant Secretary.

## NEW YORK STATE DEPARTMENT OF PUBLIC INSTRUCTION.

Superintendent Abram B. Weaver; Deputy Superintendent Edward Danforth.

## COLLEGES, ETC.

Columbia College—President Frederick A. P. Barnard, D. D., LL. D., L. H. D.; Professor Charles Davies, LL. D.

Union College—Professor Tayler Lewis, LL. D., L. H. D.; Professor Oady Staley, C. E.

Hamilton College—President Samuel G. Brown, D. D., LL. D.; Professor Edward North, L. H. D.; Professor John W. Mears, D. D.

Hobart College—Professor Maunsell Van Rensselaer, D. D.

University of the City of New York—Professor Benjamin N. Martin, D. D., L. H. D.

Alfred University—President Jonathan Allen.

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## THE MORAL AND THE SECULAR IN EDUCATION.

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*ἢ θηρίον ἢ θεῖον*, says the master mind of antiquity; man must sink to the beast or rise to the divine. There is for him no standing still, no middle way. The animal just fulfills the law of his nature, and therefore it is that he remains stationary; he has no conflict, no struggle between a higher and a lower being. Man has a nature, but he also has the supernatural. By the aid of the latter he rises above nature; by its loss or degradation he sinks below it. He becomes that most frightful thing, an animal with a reason; in other words, a demon, a fiend.

We take this as the pervading idea of the present paper. It is the thought which presents, above all others, the peril as well as the dignity of the human existence. Shall it be overlooked in education? Or is anything entitled to the name that does not recognize, in some way, its incalculable value as an element of culture? Let us be practical here. Experience has abundantly shown that no amount of mere fact knowledge, or of science, in the modern restricted sense of the term, can give security that the man possessing it may not turn out a monster of crime and a deadly scourge to society. It may be conceded that, indirectly, the mere knowledge, of which I have spoken, may have something that seems like a moral influence. As an aid to a higher position among men, it may furnish a motive to correct outward behavior. The same may be said of the pursuit of wealth, or of anything else that gives rise to a worldly prudence, taking the place, for a time, of moral principle. When this, however, is not the case, or such an education gives less distinction by being more and more diffused, then, instead of a check, it may become a direct incentive to crime by creating increased facilities for its commission. Evidence is constantly accumulating that the processes of the burglar, of the incendiary, of the counterfeiter, of the abortionist, of the poisoner, of the railroad destroyer, of the prison breaker, are actually making progress with the progress of

education. They are becoming arts. There is reason to believe that, before long, books may be written upon them. There may be such a thing as a felon's library. And so in respect to mere speculative knowledge. When wholly destitute, as it may be, of moral ideas, it may only wake up the faculties of the soul for the discovery of evil, and make them all the more acute for its perpetration.

#### MAN IN AN ABNORMAL STATE.

In giving my views on this wide subject, I can only aim here at presenting some very general ideas. There is the great *fact*—so it may be regarded rather than as a tenet or dogma—the great *fact* of something wrong, fearfully wrong, in man. This we may say without trespassing on the ground of Biblical theology, or inquiring into the way and agency of its origin. The editor of the Nation, one of our ablest literary papers, was, lately, discussing the reason for the failure of all rules in political economy. He can only account for it by admitting, to use his own strange expression, that there is, somehow, a “screw loose in man.” The language may seem lacking in dignity, yet is it most impressive as well as significant. Humanity is in disorder. I would not use the word *fallen*, because it is desirable to avoid the special technics of any peculiar theology. But there is something wrong in man. His nature has, somehow, received a great moral shock. The appeal might be made to the Bible; but, in such an argument as this, profane history is more likely to be attended to, and its proof is all-sufficient. From the earliest record of our race, the human world has been full of the most deadly evil. Who will dare deny it? Age after age of crime, injustice, fraud, violence, cruelty, have furnished a record which stares us in the face, and forbids all ignoring of the fatal *fact*. Our own, with all its boasts of progress and civilization, furnishes a full quota to the complement of these dark and bloody statistics. Within ten years the most causeless rebellion known to human history has laid waste our own fair land, and caused a sacrifice of more than half a million lives for its suppression. Who slew all these? We inquire not now in respect to the political causation; but great guilt lies somewhere, and should in some way be confessed. The damning fact still remains that this awful ruin, this fearful waste of human life belongs to an age, and to a race, and to a country boasting their superiority to all others. Within a still less period, a most desolating war, breaking out professedly on one of the most frivolous points of political etiquette, has occasioned a still greater loss of human life, dismembering and crushing to the earth the proud-

est nation in Europe, whilst leaving to its antagonist a demoniac triumph, unchecked by the universal mourning within its own territory. Later still, a band of men claiming to be reformers, get possession of a great city already desolated by the horrors of war, and vindictively devote it to fires and slaughter, surpassing all it had before endured. Later still, this many-faced evil shows itself in vile thefts and robberies on the largest scale, perpetrated by men entrusted with the government of our own commercial metropolis. Very varied have been its aspects, but it has ever shown itself the same inveterate disease from the very beginning of all that is known respecting humanity. All along the path of history there have been times and influences that seemed about to furnish some evidence of change, some faint dawning of the prophet's latter-day glory, or the poet's golden age; but how soon have they been found deceptive! The disease has only been taking some other form. Crime has changed its Protean features. Violence has seemed giving place to fraud, or despotic cruelty to political corruption. Civilization brings in evils that balance all its seeming benefits. Discoveries in science have soon been perverted to the introduction of new forms of danger and of crime. Even God's interpositions have been darkened and turned aside from their gracious effects by the inveterate strength of this great moral calamity. For ages has our world been the theater of a mighty war between the powers of good and evil. We are compelled to admit this, whatever we may think of the termination of the struggle, or the agencies divine or human by which it is to be brought about.

The theologian's word for this is depravity. Man is fallen, he says. I would rather describe it here by a word which cannot offend, because it is now so much employed by scientists and reformers in other and far inferior matters. We might say, then, that man is, somehow, in an *abnormal* state. He makes a sad discord in a world for which he must have been designed as the key note. He is not doing that which might have been rationally expected from the faculties given and the dignities conferred upon him. Though endowed with reason, he is living the life of the beast in its essential selfishness and animality, notwithstanding the fair appearances presented by a purely outward civilization. Now, as far as science can discover, everything else in the mundane system is living according to its law. Thus is it in the purely animal world. Every species is doing what God, or, if any prefer the term, what Nature intended them to do. They are doing it well; they are doing it perfectly.

We cannot think this of man. It is blaspheming God, it is blaspheming Nature to affirm that the doings of our race for six thousand years or more, or what they are doing now, even in civilized London, Paris and New York, are the true normal ends of the human existence. Man is not fulfilling his destiny even as an animal. The possession of reason, and the constant jar between it and his animal propensities, does not allow him even the repose of the brute. If the end of his being were merely to live according to nature, *vivere secundum naturam*, as some of the old heathen moralists, as well as a very modern school, have said, he is not doing even that. Hence the strangest anomalies, and, sometimes, the most terrible disorders, arising from the very efforts of reason and conscience to assert their divine prerogatives. Hence it is that, according to the very language of our Saviour, even the blessed gospel comes into the world as "a sword and a fire."

In the emphatic language of scripture, "the whole creation groaneth;" the whole earthly creation, the whole family of man, and the animal world, as "subject to vanity" with him, "groaneth and travaileth in pain until now." This groaning has never ceased. History, literature, poetry, art, politics, have been ever filled with it. It is like the constant moaning of the sea in its deep restlessness. As one in the vicinity of the cataract, or in the midst of the battle-field, becomes unconscious of its ceaseless roar, so the deafened ear, immersed in secularity, takes no perception of this melancholy sound. But the spiritually-quickenened organ ever hears it. It would lead to despair of man were it not for the clarion tone of that prediction, more ancient than the Sibyl, louder than any Delphic or Dodonæan utterances—that old, old promise made by Him to whom "a thousand years are as one day"—that, in "the latter" days, still future, far future, it may be, "the mountain house of the Lord shall be prepared on the tops of the mountains, and the many peoples shall flow unto it; and they shall beat their swords into plowshares, and their spears into pruning-hooks, and shall learn war no more; and they shall say: Come, let us go up to the mountain of the Lord's house, and He shall teach us His ways, and *we* will walk in His paths; for the knowledge of God *shall* cover the earth, even as the waters cover the depths of the sea." Among the papers contained in a late educational report there was one earnestly recommending the introduction of newspapers as proper reading for our common schools. I certainly have no desire to say anything against the press or its representatives; but could the spirit of secularity go further than this? Look at the contrast it

forces upon us: the political campaign newspaper to be introduced in schools as the vehicle of cultured thought and diction, of lofty and pure ideas, whilst such sublime passages as I have just now quoted—so full of “thoughts that breathe and words that burn”—the glorious language of prophets, apostles, yea, of Christ himself, must be thrust out as narrow, bigoted, sectarian, hostile to liberty, to elevation of thought, and to human rights!

Now in the rectifying of this abnormal state, shall public education take no part? Shall that fact be ignored without which history is unintelligible, and political philosophy becomes a mass of contradictions? For such a philosophy is founded alone on this very idea, that, in the conflict between the human appetites and the individual human reason, the latter is the weaker power, and must, therefore, be strengthened by the collective prudence, and by every appeal that can be made to something super-earthly, or rising above the blindness and irrationality of the individual selfishness. If humanity *is* in an abnormal state, if there is, indeed, “a screw loose in man,” then may we surely say that such a fact must be fundamental in education, and that the political philosophy which ignores it *must* be false from top to bottom.

The design of this paper is to express a few truths, relating to education, in their most general form. I cannot, however, avoid advert-  
ing to certain topics of a more special kind, suggested by the peculiar language of a late resolution passed by one of the city boards of instruction in the West, and which is beginning to be adopted elsewhere. It directly forbids the use of the Christian Scriptures, in any way, in its public schools. Not content with this, it declares prohibited “*all religious instruction*” whatever. Have the authors and favorers of this broad resolution ever asked themselves what would be its effect if carried out to the fullest extent its language would seem to warrant? “All religious instruction,” say they. This, of course, includes all moral instruction that has in any way, directly or indirectly, any connection with this tabooed subject of religion. Have they really thought what would be left beyond those mere mechanical processes of reading, writing and computation, which are more strictly the means of education than education itself? There is no need of dwelling on this. The mere presentment of this matter is enough for every thinking man who understands how intimately and extensively ideas moral and religious, or immoral and irreligious, are connected with every department of knowledge, and how inevitably the exclusion of the one is the favoring of the other.

## RELIGIOUS IDEAS IN HISTORY AND SOCIAL PHILOSOPHY.

What is history, stripped of everything that has relation to this forbidden ground? What kind of political economy is that into which no moral or religious ideas are to enter, or which has nothing to do with any ethics of Christianity? What is political philosophy, thus denuded? Why, the very questions, what is government, and whence its authority, are fundamentally religious. What is the State? What is true law, and wherein does it differ essentially, from what is called mob or lynch law? Whence comes the right of a majority to rule a minority? Whence the right of the people any more than the right of kings? Whence does government get its power of life and death? What is crime? What is punishment? Is there no difference in our treatment of the burglar and of the victim of the small pox? On what ground does the State assume to punish? Is it for moral reasons in any cases, regarding crimes as offenses against a national conscience which would be injured by their impunity; or is it solely as a proceeding of convenience or expediency? Is there such a thing as a national moral sense? These are all religious questions, and must receive religious or irreligious answers. In short, is the State a mass meeting, coming and going, convening or seceding, just as it may please any part or parts of parts? Or is it "a power ordained of God," in its essence, in its sanction, religious and divine? Is it a whole that did not make itself, and is, therefore, dependent for its authority on a super-earthly power, whatever may be its outward forms? What determines a whole of territory, or a people as an integer; or what social compact, and between whom made, gives power and right *to be a people*, before there is a defined people, on a defined territory, and who are thereby authorized and empowered to contract with each other? These are religious questions, we say, because they immediately carry the mind to ideas higher than those of popular consent. They suggest that God must have something to do with nations, with the origin and ground of authority in governments; that this should be acknowledged as a fundamental truth, and made part of a true political education.

With these wider political relations are intimately connected the social and the domestic. The family is religious. So is marriage. If totally divested of the higher ideas so long inherent, or thus universally regarded by the popular mind, it would not be long before both would become assimilated to the herding of the beasts; even as striking tendencies in our own age and in our own land are rapidly showing. In fact the education that wholly excludes religious ideas



must ignore almost everything that has the highest value for the human soul. It cannot be done; and even if it were practicable, it would be like coarsely ripping out all figures of life from the richest tapestry, thus rendering worthless the whole fabric that remains.

#### SCHOOL AND TEXT BOOKS.

No religious instruction! How then are we to determine in respect to books, whether for the primary or the higher departments? We might, indeed, have an arithmetic which had nothing moral or religious about it; but how in regard to reading exercises. What kind of a figure would they present after there had been weeded out of them all religious and consequently all irreligious ideas? This latter word, though carefully avoided in the letter of the resolutions referred to, falls certainly within their spirit, or the reasons given for them. For neutrality involves reciprocity. It is, in other words, the exclusion of everything to which any portion of the community, great or small, may object, and on any ground they may choose to allege as affecting their rights or their consciences. "No religious instruction," says the resolution; the question what is religious instruction being, of course, to be determined by those who make the objection. On this ground they proceed first to expel the Christian Scriptures. The reason given is that "the children of the parents of all sects and opinions in matters of faith may enjoy alike the benefit of the Common School Fund." They profess to be the opponents of sectarianism. But what, it may be asked, are any of the evils of Bible reading to the virulent sectarianism that lies behind this plausible proceeding? "All sects and opinions," they say; but where is the reciprocity? Suppose that, instead of the Bible, it had been resolved that "Combes' Constitution of Man," a book often recommended for schools and school libraries, together with all teaching built upon or assuming its ideas, should be excluded. What an outcry of bigotry, intolerance, "behind the age," etc., would immediately have been raised in certain quarters! What an alarm of Church and State should we not have heard! And yet many parents, very intelligent as well as conscientious parents too, do honestly regard Combes' work as irreligious and demoralizing in its tendency. Why should not they also have their veto? Why are not their rights and their consciences to be respected, even should they happen to be ignorant and unreasonable? Go on with this; give everything its veto on the sole ground of the demand, irrespective of its truth and



rationality; allow of nothing as entitled to respect because of its representing what has long been held sacred, or is regarded as predominant in the best thinking of the community, and thus as having, in the truest sense, become a part of the social mind; sweep away, by this veto power, everything most precious to the best portion of our population, and what would remain out of which a school or reading book could be compiled.

#### SECLAR EDUCATION.

To some minds, however, all these difficulties are settled by the magic of a word. It is the term *secular*. They use it as though it were a boundary line as distinct as the Ohio. It is a notable example of the way in which men cheat themselves by a word. Attempt to define secular education, what it embraces, what it excludes, and we shall find that hardly a step has been taken in the solution of the difficult problem. *Secular* (seculum), belonging to the age or *world* in which we live. But we live in two worlds at the same time. It is this duality, and the spiritual conflict arising from it, which distinguishes us from the animal. God has given it to us, this double being, and what he has joined together man may greatly derange, greatly mar, but cannot put asunder. We live in two worlds, we say, the near world, the world of sense, and the great *seculum seculorum* by which the first is ever encompassed and pervaded. We breathe the atmosphere of both, and there is nothing belonging solely to the one regarded as wholly separate from the other.

But take the word *secular* in its lowest sense: we do not thereby escape the difficulty of the rule that requires the exclusion of all controverted ideas. Men differ much about things secular. Political philosophy should be taught in our schools. So all say. Our children should be instructed as to the nature of our political institutions. But men differ in politics. My hearers will understand me as referring not to any mere momentary questions of party platforms, but to principles deemed fundamental in government, such as those before referred to. There may be those among us who do not believe in republicanism. Shall they be allowed their veto on school books that represent the general national character in this respect? Or shall they be told that there is something predominant here, and that such predominance must be respected in the national education? Holding republicanism to be right, we do rightly and wisely in giving our children a bias toward it in early life. We will not listen to the pretentious free-thinking which demands that the young mind should

be kept open in this respect. The few monarchists or the few communists among us must put up with it. A predominant national character is a most conservative element of nationality, and this is not to be sacrificed to *their* abstract right of opinion. The true inference, as it bears upon the other and still greater question, is most obvious. We have a few atheists among us; there are some who believe only in Nature; they are to be treated with all tolerance, but our long inherited Christianity is not to be driven from our schools and colleges on the ground that, in any honor shown to it, there is a favoring of opinions which they do not hold. It is in possession; it must be proved false before it can be summarily ousted in this manner. The parallel is unanswerable. To say the least, we are no more a republican than we are a Christian nation. Long may both these aspects be preserved.

So also do men differ in æsthetics, in art, in philosophy, in literature; various opinions are held in respect to political economy. Not a shadow of a reason can be given why the principle involved, and the veto claimed, have not an equal application to disagreements in these matters as well as to the tabooed question of morals and religion.

#### THE INTERDICTION OF THE BIBLE A FAVORING OF UNBELIEF.

It is vain to say that the mere exclusion leaves belief in the Scriptures, and in religion generally, just where it found them. Had they never had place in our schools, the case might have presented a different aspect; though even then the question might fairly have arisen: Why should all knowledge of this kind, forming, as it has, such an important part in human thinking, be wholly shut out? There is no disputing the fact, however, that, from the earliest settlement of our country, such culture had been regarded as belonging to the school. Its positive exclusion, therefore, must have a directly positive instead of a mere negative effect. It must give an infidel bias, to say the least, to the mind of every child at all capable of understanding the strange proceeding. Why, he may well ask, is this book so branded with the stigma of exclusion, when everything else is allowed to come in? When we consider how susceptible of impressions the mind is, at that early period, we may better estimate the moral mischief of such a ban. It is idle to talk of the family and the Sunday-school as a remedy for this. In the first place, vast numbers of our children can have little or no instruction in these ways; in the second place, there is to be considered the effect of such a public tabooing in

weakening the power of domestic instruction, even within its own limited sphere. It is morally unfair to place religious truth under the influence of such an open ban. How must it destroy reverence for the Bible at home, when the child sees it so cast out of the school as some noxious thing, dangerous to liberty and "the rights of man." The effect will be increased by the seemingly higher authority which the public character of the proceeding necessarily imparts to it. The lesson there learned will have more influence upon him than any taught in a lesser circle. The Scriptures, all serious truth, he is thus early taught not simply to neglect, but to regard with suspicion. That is the book, says one child to another, whose reading has been forbidden in the school; can it fail to diminish their reverence for it as it is opened for the domestic worship? How readily, too, will this feeling co-operate with that tendency of the young mind which turns to the world of sense, the world of pleasure, away from all that sober truth, some taste for which it so much needs in the first dawn of life. It is thus that the minutest variation, the merest bias, may become an immeasurable angle of deflection. We are to consider, moreover, what it will be when the proceeding becomes general throughout our land, and the association of ideas connected with it has entered into and become a part of the common mind. The public effect must become, in this way, far greater than the domestic; the school must overpower the family, since what we think with numbers, even though it be superficial, has an influence ever increasing in a geometrical ratio. The public school is the place to which our children go in order to learn that which is to be of greatest value to them in life. So it is said; but no mention is to be made there of God, or soul, or any existence beyond the grave. Will not this be decidedly irreligious education, which no play on the word *secular* can disguise?

#### NO RECIPROCITY.

There is no neutrality, no reciprocity here. The effects, too, are most unequal. It would be difficult to show that belief in a God and a future life is unfavorable even to the best worldly good. The loss in the other case, if it be a loss, is incalculable. One, too, is against the stream of human appetite; the bias to unbelief, on the other hand, concurs with the animal tendency; and thus it is that this slope of Avernus is all the more rapid, all the more unconscious, and, therefore, all the more easy, under the disguise of a merely negative, and, therefore, harmless principle.

Again, there is another reason why there cannot be any true reciprocity in this matter. Religious and moral instruction is, from its very nature, positive and direct. It seeks no disguise. A personal God, a divine law, a divine retribution here or elsewhere; these are positive truths, if truths at all, and can only be conveyed in a positive manner. Hence it is that the teaching of them ever calls out that most dogmatic cry of dogma. But if these truths are not to be taught in our schools, then it would follow unanswerably, on the same principle of reciprocity, that the controverting them in any way, or what might seem such to any man's conscience, should also be excluded. My conscience, says the atheist, my conscience objects to being taxed for the support of schools in which religion in any form is taught; it breeds bigotry and superstition. My conscience, says another party, objects to being taxed for the support of schools from which every form of religious teaching is excluded; the very act fosters unbelief. Why, to say the least, is not the latter conscience as much entitled to respect as the former? Much more may he thus object to anything which, in his thinking, reasonable or unreasonable, has the least effect to undermine faith in what he believes, or wishes his children to believe. Now the great unfairness here consists in this: that whilst religious and moral truth must be presented, if presented at all, in a positive form, the controverting of such truths may come in, and does come in, under every conceivable disguise. Thus, for example, there may be a desire to have taught, as a part of fundamental education, some of those ideas which are least of all sectarian in the true meaning of the word, or which may be regarded as belonging to Christianity in its widest sense: the being of a God, a divine law, retribution, a Saviour, with the related ideas of salvation, an immortal life, another and a higher world, a belief in some way in Providence and Prayer. But no, says the objector, those are dogmas; they can have no place here. The same language is held in respect to the lyceum or the lecture room. We want no theology to disturb us here. But how is it with the other aspect? Any one who has carefully observed the course that is usually taken, especially in that common educational means we style the lecture, knows how the thing is done. There is presented, perhaps, some system of sheer naturalism; the divine name is not mentioned; there seems to be no denial of a Providence, general or particular, but the opposite ideas are, nevertheless, left upon the mind, and in the worst way. From this confused glamour of nature, and causation, and evolution, and the inviolability of physical law, there emanates continually a subtile,

secret influence, undefined and undefinable, yet undermining all faith, and that, too, by a process of which the subject is least aware. He somehow finds that he has undergone a change. Truths held before present a different aspect. Though not a word has been directly said by way of controverting them, he finds belief more difficult. For the young person who has been subjected to this unfair influence, the worship of the family, the instructions of the pulpit have strangely lost their power. Now let complaint be made of this, and the answer is a prompt disclaimer. The lecturer, or the author of the text book, or the compiler of the reading book, replies indignantly that he had no sectarian design. He meddles not with dogmas — not he. It is not theology or atheology that he teaches, but *philosophy*; if any are offended by it, he cannot accommodate himself to their blind prejudices or their narrow ideas. And then, perhaps, he takes the attitude of the persecuted man, and tells over again, for the thousandth time, that very fresh story of Galileo and the Inquisition. The unfairness of which I speak takes another form. The lecturer, or the author freely admitted into the schools, dwells, perhaps, in the imaginative, the æsthetic, or the sentimental region. Still there is a like undermining of old truths, or what is more common, a mean and sophistical taking for granted that they have all been exploded, and can no longer be recognized by men claiming to be intelligent. But no; that is not meddling with religion; that is *literature*; or it is art, or “the higher thinking;” it has nothing to do with dogmas. This disguised spirit of unfairness takes still another form. It goes on to talk just as it would if no personal God existed or were acknowledged. It babbles of development to the utter ignoring of anything like a developer; for there is no fact induction that ever reaches such a power, and out of this we can never travel. Is an objection made by the religionist, the answer is ever at hand: this is *science*, and it cannot help your dogmas. Science deals alone in facts, and must draw its conclusions therefrom; though the facts known be still, to the facts unknown, like a single leaf to the forests of the Orinoco. Science has to do with “the things seen;” it meddles not with that region beyond sense, and beyond reason, where faith has its dwelling,— a very respectable thing, doubtless, but, belonging to another sphere. It would be unscientific, he says, even to think of answering objections coming from such a source. I appeal to every observing man in my audience, whether the sketch given is not a fair statement of the way in which, under this negative pretense, the bane of skepticism is

allowed to pervade our social education, whilst the antidote, if a certain view becomes established, is wholly shut out.

**EDUCATION MUST ACKNOWLEDGE WHAT IS PREDOMINANT.**

It may be said that I am only stating difficulties without pointing out any way of settling them. . . But much is gained if there can be produced a conviction that there are such difficulties, and very great ones, in the way of all such innovations on prevalent ideas, and all such attempts at setting up vetoes against what is predominant in a community. When it is generally understood how closely moral and religious ideas are interwoven in the whole fabric of education, and how impossible it is to map out what may be comprehended in that vague word secular, then may there be discovered, perhaps, some basis on which these difficult questions may rationally rest. It may set our best and most candid minds to thinking whether there may not be some compromise grounded on the acknowledgment of something predominant in our religious and moral ideas as well as in our politics and in our social economy. It would be well worth our keenest study to discover whether we cannot have a system of public education unsectarian in its spirit, free from all intolerance, and yet embracing those great spiritual ideas without the recognition of which no government can long exist, and that general Christianity which is as much a national characteristic as the republicanism we profess, or the language we speak. This *must* be discovered, or the whole idea of State and national education must be abandoned. The word *secular* will never solve the mighty problem.

**THE IDEA OF ANOTHER LIFE AN ESSENTIAL ELEMENT OF EDUCATION.**

Permit me to return again to that great question respecting the true normal or abnormal position of humanity, which was barely touched upon in the introductory remarks, under that head. The selfish principle in man, the worldly or secular principle, needs no aid. It is strong enough already; too strong, as the whole history of the world has shown, as our own history is now most unmistakably showing. It needs some counteracting power. In describing what this is, I would avoid, as said before, all technical theological language, as far as that can be done without a cowardly compromise of truth. This counteracting power is to be found in an idea, not so much dogmatically taught as assumed to be fundamental in education, ever present in its primary as in its highest instructions. It is the idea of another life for man, a stage of existence higher, grander



vaster, immensely exceeding, and to which the present is but the introduction as of a narrow porch to a temple infinitely wonderful and sublime. It is the idea of a state of being having infinite glories, and, therefore, from the very nature of things, attended with infinite perils. Aside, however, from any fear-inspiring retributive ideas, there is, in such a thought of a vast existence, taking early possession of the soul, and abiding with it so as to be in some sense a part of its life, constantly present in its influence even when not a direct object of consciousness,—there is in such an habitual idea, we say, an elevating, enlarging, purifying power, that makes alien and repulsive the very thought of crime, and gives the indwelling conviction that the worldly, the gross, the low, the sensual, the animal, is somehow unworthy of a being who has ever before him such an immortal destiny. It operates as a vital influence rather than as a fear, a motive, or even a reason. It is a *power*, to use the remarkable language of the apostle, “the power of an endless life”—*δυναμις της ζωης αταλυτου*—of a being that cannot be broken. The opposite influence, as said before, is strong enough in itself. Selfishness, worldliness, secularity, the spirit of the age, need no aid from education to develop their growth or those physical utilities on which writers of the Buckle school are ever insisting. It is the other principle which needs the earliest and most assiduous nurture. Socrates saw that when he said: “If the soul is immortal, then is it the great object of our keeping, and that, too, not only for this time we call life, but for that far greater existence, the *all*, the great *whole* of being; for noble is the prize and great the hope.” We think of one wiser than Socrates, and who said: “What shall a man give in exchange for his soul?” The endeavor here has been to set this forth in the most general, or undogmatical, way, and yet without any compromise of its incalculable value. It is not as a remote good at the far end of the lever supposed to outweigh a near temptation, but a great idea early implanted, ever filling the soul, and preventing that false magnifying of present surroundings which so obscures everything else in the spiritual horizon. I am immortal, and, therefore, to do this were unworthy of the vastness of my being. There is only one other reason that transcends it. It is the language of one of old, in the dim dawn of ethics, or when moral ideas were but in embryo, as Lubbock and Buckle would say: “How shall I do this and sin against God?” But the thoughts are essentially related as grounded alike on the idea of eternity; and to him who habitually holds the one the other is ever very near. Shall we listen to the men who call such

teaching sectarian, and, therefore, refuse it all place in education? To this there is but one answer, in which all must agree who have the least shadow of a title to the name Christian. Compromise may be carried far; but there must be some stopping place. There are some things bound up in the very life of civil society. No amount of atheistic clamor, no desire to conciliate the atheistic sect—for sect they are, and a very intolerant one, too—should, for a moment, permit the thought of banishing from our schools an idea so fundamental as this. It needs not to be taught as a dogma—to give it the odious name that some are so fond of using—but to be laid down rather as a starting principle which alone gives value to every other kind of knowledge, as the vitalizing truth most conservative of the political well-being, as the ennobling doctrine without which the present world becomes a dream, an inexplicable enigma, and all that may be called “the rights of man” disappear in the going out of that hope of immortality which elevates man above “the beasts that perish.” An easy analogy will aid us here. What would we think of that education of the child which should be so extremely childish as to have no recognition, not the least intimation, of his coming manhood? *A fortiori*, then, *atque a fortissimo*, must that education for the adult youth be irrational, beyond all measure of irrationality, which positively forbids all reference to that higher manhood of which the present life is but the opening stage.

It is indeed a most practical position which is here contended for. What remains of virtue there are in our sin-disordered world are inseparable from such an idea. Faint as it is, weak as it has always been in opposition to the strong worldly influence, still it is this feeling and this idea that give to the human soul its sense of spirit worthiness. It is this that makes it the most efficacious check to crime. It is the only thing that can give force or meaning to that misleading phrase “an enlightened self-interest.” A present advantage, a present temptation, whether of appetite, or avarice, or ambition, fills the mental horizon, blinding the mind to every other consideration, and surprising us often by the suddenness of the transgression to which it leads. Hence the explanation of a fact by no means infrequent, and yet at every occurrence calling out our wonder, as though it were some inexplicable phenomenon. One who has heretofore stood most fair in the public estimation, suddenly falls into crime. He commits some violent outrage of which no one would have thought him capable, or some gross fraud or malfeasance which seems wholly alien to the character he has heretofore borne; or after having long carried the



name of "the honest," he suddenly belies it by taking a course which for years has fallen under his own unsparing condemnation. Such persons are not sinners above all the Gallileans. Strange, indeed, and puzzling are their cases; yet they occur often enough to fill us all with fear and self-distrust. How could he have done it, we say. The explanation shows the fallacy of a wholly secular morality. In some unguarded moment, a near present advantage has so suddenly enlarged its appearance as to overpower the thought of any remoter worldly good. Character and standing are thrown in the back ground. The whole power of a merely secular ethics goes down before this new and blinding force. The man falls; and before our newspapers have ceased to make a wonder of it, there is a similar case to crowd it out of notice. How could he have been so blinded, we say; an enlightened self-interest should have prevented this. But alas for the secular virtue; its weakness is in proportion to the confidence of its trust; selfishness, of itself, whether refined or gross, or the idea of self taking in only the present being, is in itself essential darkness. It cannot, of itself, enlighten or be enlightened. Its very nature is to blind and bewilder the judgment in respect to the true good. It occupies itself with shadows and spectres deceptively seen in the distorting mists of a near present magnifying them out of all true proportion. The only cure for this, the only way to make it a truly "enlightened self-interest," is the early education of the soul to the habitual keeping before it of the great future, the "great all of being," as Socrates calls it. It needs to have ever present this vastness of the human existence, so as to counteract, by its appalling infinity, the effect of present temptation having its strength in its nearness, and in its immensely magnifying power. To bring nigh the great and the distant, to abate the undue influence of this near world of sense, this sea of secularity that is surging around us, and sometimes suddenly going over our heads with its darkening floods of evil,—this is certainly an end of education, and a most important one, if regarded only in its higher spiritual effects, or its influence in saving the mind from the narrowness and belittling power of mere earthly ideas. We prefer thus to leave it, instead of giving it any closer connection with other views on which men may differ, such as the nature and extent of retribution in another life, the methods of redemption, and the special views of the divine associated with them.

In our most modern idea of the school as excluding all religious ideas, the tendency must be strongly and inevitably all the other way

This *dunya*, or near world, as the Arabians call it, fills the whole circle of vision. Present success in life, wealth, business, office, political power, in a word, worldly good, is held out everywhere as the end of our secular education. We need the counteracting idea of the infinite future, of the infinite all of being. It is the want of this which warrants us in calling our education animal, even in its highest or most scientific pretensions. It is animal in that it is only for the present. It is because of their having no idea of a great future that the brute races cannot be truly educated. The animal lives in the present; for this was he made. He has no spiritual conflict; he never resists a present appetite; he has no conception of any power or reason for so doing; he was not designed for any such purpose. Man, on the other hand, is intended to war with nature, and thus to rise above it; it is the human probation, the human discipline for the higher sphere. The system of exclusively secular education teaches the directly opposite idea, as we all know; but whether, in proposing to himself such an aim as the only end of his being, man truly conquers nature or is conquered by it is the question which yet remains to be solved.

On the other hand, there is strong ground for saying that this counteracting tendency of spiritual culture is the only thing which can make the highest civilization a blessing instead of a curse. It is the only power which can prevent it from falling into that circuit of excessive worldliness which such a secular spirit, without this correction, ever engenders. The history of the world shows that no genealogy is more sure. An irreligious civilization begetting an odious selfishness, selfishness begetting a blinding secularity at war with every elevated idea, worldliness engendering crime and sensuality in their most revolting forms,—of these are born cruelty, caste, disruption of social ties, unnatural passions, inhuman ferocities, and thus the age comes round again to that animal barbarism of which it professed to be the antipodes. It may take new forms, but it is only a more hideous animalism after all. It may make a show of science and philosophy even, but it is still the wisdom so expressively described by the apostle as “earthly, sensual, devilish.” The thought cannot be better expressed than in the remarkable language of a serious heathen: “In such a wheel of sequences,” says Longinus, in his treatise on the sublime, “in such a wheel of sequences, it cannot be but that, by little and little, there comes round a decay and corruption of human life; all spiritual greatness, too, must fade away when men boast only of the mortal and the

earthly, or are occupied solely with admiring and praising these, whilst neglecting the growth of that which pertains to immortality." Such must always be the result of a godless enlightenment of the mere worldly mind, or of what would be called an exclusive secular training. For the best good even of this world, in its most secular aspects, we cannot keep too high and too pure the thought of another. Man must degenerate when there is no idea predominating over that of the present life. Where this has become dim or gone wholly out, there no degree of wealth, or civilization, or even of literary refinement, can stay the march of crime, whilst science itself may become one of the chief means for furnishing facilities to its progress. When, on the other hand, the spiritual good takes precedence, the worldly welfare will certainly follow in its train. "He that would save his life shall lose it; he that would lose his life shall find it." It is as true of ages and communities as of individuals. Is a generation, a people occupied pre-eminently with the ideas of another life, the habitual contemplation of our greater being? we could say with the utmost confidence, such a generation would not be squalid, it would not be unclean, it would not be oppressed with debasing poverty. Luxury it might want; in many of the elegancies of life it might be deficient, but poverty as well as vice would be in a great measure unknown in a community where the ruling thought was the timeless value of the spirit, and the highest political duty recognized was that of providing for the education of the immortal being.

#### CONCLUDING REMARKS.

I have ever regarded this University Convocation as a school of thought, rather than as a fashioner of educational measures. I therefore offer no apology for presenting to it a paper which deals mainly with general or abstract ideas, and that, too, on a matter which some might regard as excluded from our consideration. I am aware, too, that I have been occupied with the description of difficulties rather than the proposal of any practical measures. There are, however, two grave questions, practical too, as well as grave, which I would present to this assembly of thoughtful men. The first concerns the successful finding of this neutral line, this purely secular region of which some speak, as though it presented no difficulty. It is the practicability of determining the process by which all that is religious or irreligious in its nature or tendency is to be eliminated from education, without reducing it to those bare mechanical exercises which are unworthy of the name. The second question would be, whether this neutrality,

if such a line were theoretically found, could possibly be preserved. Can the State really be neutral, and continue neutral, in these great matters, any more than the individual? Can it refuse all favor to religion in its most fundamental ideas, without favoring irreligion? And this suggests another and deeper form of the same question which, in this age and in this country, we are especially called to look directly in the face. Is not that which calls itself no religion in fact irreligion? In other words, is it a mere negation, a mere vacuum of religious ideas, as it assumes to be in its claim to neutrality? It is the very nature of some ideas that there can be no neutrality in respect to them. Their antithetical terms, as furnished by the instinctive logic of language, are not negatives, but carry with them the sharpest and most positive of logical opposites. As, for example, the Latin *inimicitia* does not mean, simply, not friendly, but the most positive enmity, and *immitis* not, simply, *not mild*, but the most relentless cruelty; so irreligion, when analyzed philosophically as well as etymologically, is not a mere indifference, it is not a mere negation, but a most positive entity, a most assertive idea, a most aggressive dogma, more intolerant in fact than any form of sectarian bigotry. Blind indeed is the man who has not seen the evidence of this, as it has displayed itself in our own country, and lately took a visible demoniac form in the Commune of Paris. The question is barely presented here. It cannot be denied, however, that it is one intimately connected with any discussion in respect to the duties and the limits of national education. It suggests, too, the thought whether any amount of concession to this positive irreligious spirit, this most aggressive of all sects, will ever lessen its demand, until every moral and religious idea, every thought that has a relation to a God above, or to a world beyond, or to any divine government, or to any higher law than human wills, shall be wholly swept from our schools, highest as well as lowest, from our legislation, our jurisprudence, our domestic institutions—so far as they are acknowledged by law—in a word, from our whole social and political life. It is a fearful question; yet must we not shrink from an attempt at the solution. Woe unto us if we cannot solve it, if we cannot compromise on certain great religious truths, and say unto the few who may be hostile to them: Further than this we cannot go; they who demand their rejection from our schools may have all toleration given to their individual belief, but they cannot be allowed an excluding veto.

What are these great religious truths that may be regarded as forming such a basis? May the speaker be pardoned for making the

attempt to set them forth in their most general form. They may be presented under four heads: 1. A personal God, ruling over worlds, over nations, over individuals. 2. A divine law, conceived as the basis of all morality, whether national or individual. 3. Man an immortal being with immortal responsibilities. 4. The idea of Christ as the teacher, the Saviour, the true light and life of man. The first three belong to the very essence of religion, even as acknowledged by heathen nations. The fourth is the idea, expressed in its least dogmatic form, without which no man, no collection of men, no nation, can be called *Christian*. Here may we take our position. Beyond this no religionist should wish to go; short of this no compromise can stop. A more minute inculcation is for the pulpit or the family, according to the denominational view, but these outlines are the rudiments of a Christian State. They cannot be yielded without yielding all for which the State has any value.

The question must soon be settled. The crisis is coming, and along with it, if settled wrong, another decision from which the Christian must not shrink. It involves his tenure of citizenship. When the voice of the State banishes all such ideas from its education, then should he hear another voice saying: "Come out of her, my people." In the school where Christ cannot be named he can have no part. In the land where it is forbidden, he may continue to dwell, but only as an alien. He may submit to the tax collector, even as Christ paid tribute unto Cæsar, but he can give no vote, he can hold no office, no citizenship, in a State, so called, which, in its education, in its legislature, in its jurisprudence, openly avows that, as a State, it knows no God, no religious idea, no superhuman sanction of the authority it claims to wield over the millions now living and the generations yet unborn. Such a State is not simply neutral. It is not simply not-Christian, or un-Christian, but *anti-Christian*. One who believes Christ when he says that what is not for him is against him, can have no membership in such a godless structure. Make religion unsectarian—it can be done—but there will still remain ideas in respect to which neutrality, or indifference, is simply a thing impossible. It must be, eventually, religion or irreligion. When this is fully understood, then are we prepared to form some estimate of the greatness of the question I have ventured to present to this Convocation. Whilst no decision is expected, some service may have been rendered in bringing it before the minds of thoughtful men, who, though aware of its great difficulties, cannot regard it as alien to our discussions.

## WHAT SHALL WE DO WITH THE BOOKS?

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By CHARLES H. CRAWFORD, Principal of Almond Academy.

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The wisdom of one generation, with a little brushing up, minus a few false notions, plus a few newly discovered truths, constitutes the wisdom of the next. Books are the records which preserve the wisdom of former generations and make it available to those that come after. Every new fact that is added to the general stock of information is made known to mankind through the same instrumentality. From books, then, must be obtained a very large portion of our necessary knowledge. There is, therefore, no question as to the way books are to be used by the student after leaving school; he will then consult them for the information he may need for the prosecution of his business. But, with reference to the use that should be made of them in school, the question "What shall we do with the Books?" is much discussed. The first and most natural answer is, that they should be used as a means of storing the mind with such knowledge as will be useful in after life. But it invariably happens that, while very much knowledge that is not obtained in school is needed by the student in after life, comparatively few of the facts he does learn are ever of any use to him. To remedy this apparent misdirection of energies, certain self-styled practical men have attempted to teach just the things the student is to need in after life, and nothing else. These teachers have met with, to say the most, but partial success, owing to their lack of the spirit of prophecy.

It is impossible to know just what items of information a class of students will need for their life work, except that each will probably be called upon to read, write and cipher; beyond this, no two will need precisely the same. It is, therefore, evident that the stock of information obtained in school cannot be made up of just the items the future life will demand; so the student cannot leave school with all the knowledge he shall need for his life work. The largest possible stock of the most practical knowledge will be insufficient. In all he may have acquired, there is but little that will be necessary to his success in the calling he may choose. Nor is it possible for him ever



to attain so much, that emergencies will not continually arise which demand more. No one man, in a single lifetime, much less in the short time allotted to school days, can acquire a knowledge of all the laws and decisions applicable to the infinite variety of cases continually arising in our courts of justice; or of all the diseases liable to afflict the inhabitants of a single neighborhood, and their remedies; or of all the moral and religious truths which the faithful minister will need to pit against the ever-varying forms of error that will spring up in his field of labor; or of all the facts he will need to follow successfully any other calling; for there is no prophet to foretell for him just what the emergencies that must arise will require him to know. Even were it possible for him to attain all the knowledge already developed in the field he is to occupy, new truths, demanded by the exigencies of a later day, are continually being developed. These he must be able to draw from books, for when a new truth is discovered, usually but one man is the discoverer, while all others must learn it from the books in which he publishes it.

When a new and complicated case is presented, the lawyer goes to his books, and, if he knows how to use them, enters the court-room, armed, by a few hours' study, with just the knowledge he needs. When the minister is called upon to meet new forms of error and wickedness, he seeks from the sacred writers and their commentators, and from history, for the truths and examples with which to meet them. The physician, when a new form of disease arises in his practice, must search his books for a knowledge of it and its remedies. With them all success depends, in a large measure, upon the ability to secure just the knowledge necessary; and the one is most successful who has, in each emergency, just the knowledge he needs, and is best able to use it; and it makes no difference whether the knowledge was obtained during school days, or half an hour before it is needed, so it be exact, ready, and well used. In fact, a large and very important part of the knowledge necessary to success in any profession must be learned from books just when it is needed. It is of importance, then, that the student, just leaving school and entering upon his life work, be able readily to draw from books this necessary knowledge, when the occasion demands it.

"Knowledge is power," says the old adage; but it is the ability to use knowledge, and not the mere possession of it, that makes a man powerful. That student who goes forth to his work with such a mastery over books that he can readily avail himself of the information they contain, has control of a vast amount of knowledge, which,

rightly used, is power. This mastery over books can and should be acquired in school. In other words, the student should be taught to use books in school, as he will need to use them after leaving school. This cannot be done by requiring him to memorize so many pages and so many sections each day, for that is not the way he will use them after his school days are over. From this memorizing process is gained the power to grasp and retain; but this, important as it is, is not sufficient. In the busy life for which our pupils are preparing, there will be no one found to mark the pages that are to be conned each day. There, all are learners, but each must assign his own task as well as learn it. The reason why so many of those who go forth with the highest culture of the extended college course, go forth to certain defeat in the battle of life, is that they are unable to assign themselves new tasks; and so are obliged to depend solely upon the knowledge gained in school, which is never sufficient.

If our object cannot be accomplished by requiring pupils to memorize the contents of books, much less can it be accomplished by depriving them of books, as some new theories of education demand, no matter how good the methods that may be substituted. Pupils can learn to use books as they must be used after leaving school, only by using them in the same way in school; they should be given work, the knowledge necessary for the accomplishment of which they must find for themselves, instead of having it doled out to them by the page. I do not say that all our teaching should be conducted on this principle, but enough of it to secure the desired result; just as, if we wish to cultivate the memory, we cause the student to memorize, and if we wish to cultivate the reasoning powers, we give him problems, the solution of which he must find for himself, without the aid of books.

In the usual routine of school work, that which gives the best training in the independent use of books, is the study of languages. The translation of a passage from another language into our own, requires from the student a search through grammar and lexicon for the knowledge necessary, and this search for the knowledge to be gained, gives a greater independence to habits of study than the mere memorizing of stated portions of a single text-book. And this, more than anything else, makes the study of Greek and Latin valuable.

The assigning of lessons by subject, instead of by pages or sections, is a step in the right direction. To reap the full benefit of this, the student should not be confined to one particular book, but should be required to prepare for recitation from all the books within his



reach on the subject; just as the teacher would prepare himself, if he were to teach by lectures. This plan may very profitably be combined with oral teaching, the student being required to supplement the lectures of his teacher with such knowledge of the subject in hand as he can gain from books. But there is still another step to be taken in this direction. Our more advanced academic classes should be given some subjects to prepare for examination without the aid of class instruction and recitation. The points each examination is to cover should be definitely stated at the outset, and the pupils should be required to prepare themselves within the given time from all the books within their reach.

Our object may be promoted by requiring essays on subjects which the student will need to study before writing. The subject of history may thus be mastered. Pains should be taken to give such a course of subjects as shall lead to a systematic course of reading. The study of history in schools has often been found unproductive of good; hence some have thought that a knowledge of it would better be acquired by ordinary reading. But it is very difficult to induce pupils in school to read, and if they do, a mere perusal of historical works is insufficient; while reading for the purpose of using the facts read in a composition must be effective.

My answer, then, to the question, "What shall we do with the Books?" is this: Require pupils to use books in school as they will need to use them after leaving school, that they may learn how to use them. I am aware that during a term's study in this way, the student will not have learned so many facts concerning the subject in hand as he would by memorizing a text-book, but he will have gained such ability to acquire the facts he will need to know in his after life as will more than compensate for this apparent loss. This loss need not be regretted; for not the largest knowledge of the contents of books, but the greatest ability to draw from them, in every emergency, just the knowledge needed, is the best "book learning."

## THE 'RELATIONS OF THE SCHOOLS OF THE STATE.

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BY OLIVER MOREHOUSE, A. M., Principal of Albion Academy.

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To speak or write upon the relations of the schools of the State, an unlimited range is afforded. These relations embrace not only their connection with and dependence on each other, but their bearing upon the intellectual development of the varied classes of individuals affected by them—their relation to the social, commercial, political and religious interests of the State, and their relations to the same interests and schools of other States. Indeed, the schools of our State hold an important relation, immediately or remotely, to every human interest. Other topics than merely these relations might, perhaps, more profitably occupy our time; as for example, the obligations arising from them. But, first, these relations must be considered before the obligations can be understood or fulfilled. What I present you on this occasion will pertain mainly to the relations of the schools to each other, and then, with the indulgence of the Convocation, an inference as to the action the relations found to exist, make imperative upon those having the schools in charge. The schools sustain the relation of primary, and advanced or higher, the relation of supply and demand, of inspiration and action.

The common or district school is primary; it is the supply school, the inspiring school. It is in this that the material is taken in its rudest form, and the first elements of mental culture are instilled and brought into action. It is here where the child-mind is first inspired with thought and desire to think. It is here where preparation is begun for the next room in the great workshop of intellectual men and women of the State. The workmen in the next room would remain for ever idle but for this preparatory room. The district school holds another and a much more important relation to the higher schools. In the common or district schools about ninety per cent of the entire population of the State receive or take on all the school culture they ever have, never attending any other school. This statement may seem extravagant and doubtful, but it is the result of a somewhat careful examination of the subject. These

primary schools look with propriety to the higher schools for instruction and guidance, inasmuch as they have given to the higher schools the products of their work. And these primary schools claim the best, the most thoroughly qualified the higher schools can furnish, as in this home, this district school, ninety per cent of the children are to enjoy their only school advantages. Here is seen the relation of dependence and resource, the relation of supply and demand.

The district school supplies the higher school with pupils and demands instructors. The higher school, the union school, normal school or academy, supplies teachers and demands pupils, and is just as dependent as the district or primary school. These relations being mutual, their proper adjustment and free action should never be hindered, but carefully fostered, guarded and encouraged. The acknowledgment of these relations, in the conception and execution of the various plans to meet the obligations arising from them, will be referred to by the children of the State, and the friends of universal human culture, as one of the wisest acts on the part of educators and the Legislature, to be found in the records of our educational history, and the placing of academies on the same basis will be the next. A necessity existed, and teachers' institutes and teachers' classes were created, organized and sustained by legislative enactment to meet the requirement. Much was accomplished through these instrumentalities. I have given direct instruction upon the theory and practice of teaching to more than sixteen hundred young men and women in institutes and normal classes connected with academies, a very large majority of whom have taught with fidelity and success. Other teachers have, no doubt, taught many more.

These agencies did not meet the necessities. The relation was still pressing. More and better teachers were required, and the normal schools came into being. The object for which they were created and organized was noble, one of the noblest that ever moved the soul to action. If further legislation is necessary to render the work of these schools available, by securing the *absolute service* of normal graduates in the districts of our own State, let the Legislature come boldly to the work, and make the conditions of attendance and future teaching positive. Let the standard of qualification be elevated, so that no indifferently qualified teacher can find a place in a backward school, forever keeping it backward. I insist now, as I did two years ago, that the most backward pupils need the best qualified teachers to rouse and inspire them to thought. Let the Legislature place the

academies upon the same basis as the normal, union and district schools. Let all be *free*, conditioned upon the completion of a prescribed course of study, suited to the relations each sustains to the other in the common schools, and also to the college. And here I am reminded that I have yet to say a word relative to the relation of the primary and middle schools to the colleges and universities.

These must be supplied, if supplied at all, from the fitting or preparatory schools. How near and interesting the relation existing between the academies and colleges! Shall it be dissolved? Shall the academies be abandoned? Shall the colleges cease to look to them to fill up the ranks, thinned by successive graduations? No! As I said before, let them be placed upon the same basis as the other schools of similar grade. Let them be *free*, free by legal enactment, conditioned upon the completion of a prescribed course of study. The relation of schools of the same or similar grade is disturbed when one is free and the other requires remuneration for the same service. The relation of the academy and normal school to the college is very nearly the same as that existing between the district school and the academy and normal school—so that while a full college course is acknowledged to be a good thing, and even a necessity, the fact that the college depends upon the academy and normal school for patronage may not be ignored.

It is believed that while the academies are conducted as they have been and look for support from tuition bills and the appropriation from the Literature Fund, very few scholars will be found preparing for college. This belief is based upon actual results during the past five years. The academic departments of normal schools will do a part of this work and do it well; but the few normal schools engaged in it cannot meet the demand for the whole State, or any considerable part of it, whether tuition be charged in the academies or not. As members of the normal department or class pass through the entire normal and academic courses without expense for textbooks or tuition, and as they are *pledged to teach*, they will not be very apt to take a college course, or to make special preparation for it.

It is a great step in advance to make the common union and normal schools free; while it was the duty of the Legislature to do this, it seems to me it ought not to have left the other duty undone, viz., to make the academies free also. Do not the multitudes living in the neighborhoods of academies need their advantages? Shall we have, *can* we have, the mental culture and the training for the college course without them? Will the masses in the rural districts be lifted up and

advanced by the withdrawal of this middle-school influence? Can the State afford to dispense with this power that gives, on the one hand, through the college and university course, a disciplined, leading mind, and, on the other hand, persons qualified to instruct the hosts, the millions of children, so that they may intelligently and safely exercise the power secured to them by organic law to call into public service those more cultivated and favored? Is there not a disturbance of the true relations of school to school? Have we a perfect system of schools in our State? Is our system harmonious? Has not the spirit of rivalry, hostility, antagonism, come to exert a blighting influence?

All our schools, from the lowest to the highest, have, or should have, the same general object in view; and if one needs and deserves State aid, the other does also. The principle is one, the work is one, the workers should be a unit; and all the workers should be thoroughly qualified for the place and work assigned them. As to the methods of teaching, the teacher must be competent. He must *know* what he is teaching, and *know* that he knows it. Teaching must be living. The teacher must burn with enthusiasm. He must give his teaching a living character by bringing it into connection with all collateral knowledge—geography, history, mythology, and philosophy, in its true signification. All should be tributary to it, while it must not be forgotten that classical culture stands inseparably connected with all liberal studies. There is one other relation of which I wish to speak, viz., that of English schools or classes to German, French and Chinese classes or schools. That the English branches—the English language—should be thoroughly taught, is self-evident. That all the branches pursued in our schools should be taught in English, is equally evident. As we love and cherish our own country and its institutions, so we should Yankeeify, Anglify and Americanize all that comes to our shores, whether it be language or men. Our children should master the English language in its roots, trace out the affinities of these roots, and be prepared to connect facts into principles, and qualify themselves to pursue all branches and all knowledge. Knowledge, thus acquired, *is* knowledge. What we require of our children, what is good for them, is good for the children of foreigners, and should be required of them. Had I control of the treasury of the State or Nation, not a dollar should be paid for giving instruction in any living foreign language, when the object is to qualify persons to extend its use in our country. Not but that there are advantages to be derived from them in obtaining nice shades of meaning, etc., but these

advantages sink into insignificance in contrast with the damage done in hindering the progress and perfection of our own language, so well adapted to give expression to every thought and emotion of the heart.

The theme of this paper is prolific of discussion; and while I have presented very little if anything that is new, yet I remember that our present object is not novelty, but truth, and truth less for speculative than for practical purposes. The duty of education presses anew upon each generation, just as if nobody had ever educated or been educated before. Therefore, each successive teacher, school and generation must have individually living convictions *of* and living interest *in* the relations and the great truths with which each deals. The moment that a system, whatever its original excellences, becomes stereotyped and fossilized or antagonistic in its parts, the moment that it becomes a matter of tradition, and is adhered to, not as supplying the felt needs of the present, but only as a bequest, no matter how intrinsically precious, from a buried past, that moment it becomes, so far as any practical use is concerned, "a dead-head," and the sooner it is decently buried and replaced by a system grounded on conscious wants and living principles the better. Each successive company of educators must be fired afresh with the spirit and trained anew in the methods of their works.

## ACADEMIES AND THEIR WORK.

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BY JAMES M. SPRAGUE, Principal of New Berlin Academy.

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Notwithstanding the triteness of this subject, all will admit that in it abide the germs of individual growth and national development. To treat it at a length commensurate with its real importance, would be to call forth all the wisdom and genius from the days of Plato to the present. To sketch briefly the relation of academies to other schools, the variety and amount of labor required of them, is all that can be expected of a limited paper. A school of some kind seems necessarily to be a concomitant of civilization, paving the way to fairer fields and more abundant harvests. As early as the year 1784, at East Hampton, Suffolk county, in this State, Clinton Academy, the first, and, at that time, the only institution of the kind in the State, was founded. The trustees of this institution, through a petition to the Legislature, suggested the propriety of a general system of supervision, which led to the enactment of a law, passed April 13, 1787, organizing the Board of Regents of the University. Clinton Academy and Erasmus Hall, a similar institution, located at Flatbush, Kings county, were legally incorporated November 17, 1787, and were the first two legally organized academic institutions in the State. This number has been increased, under the wise administration of that honorable board, to meet the necessities of a growing population; and now, instead of two, we have two hundred and nine like institutions, diffusing their educational light through every portion of the State, and furnishing, at this time, needed educational advantages to over 30,000 students. These institutions engage the talent and ability of nearly or quite 1,100 teachers, at least two-thirds of whom make teaching a profession, consecrating their energies and their lives to this excellent work. Surely such a grand educational power, working solely in the interest of our youth and of humanity, cannot fail to elicit our tenderest sympathies and most generous support. The work of these schools seems to be threefold. First, they are expected to prepare boys for college; hence they are a sort of intermediate or preparatory school, or stepping-stone between the common school and the college or



higher university. Second, they are to supply our district schools, in a great part, with *qualified* teachers. Lastly, they are to furnish a course of study to a large class of students, who are to end their school days at the academy, contemplating neither a college course nor teaching. These are to become our intelligent husbandmen, merchants, mechanics, legislators, and even professional men of the day; these are to fill places of trust and honor, and will stand, as they have ever stood, in the foremost rank in the development of their country's resources. Now, for a principal, with two or even three assistants, at the beginning of a term, to be confronted with such a multiplicity of topics as the above-mentioned courses will suggest, is to surround him with more or less of bewilderment. Supplement with surveying, trigonometry, commercial course, music, drawing and numerous others, and the real work of academies is most meagerly portrayed. You say at once, so few teachers cannot properly hear such a variety of classes. We grant it; but what is the remedy? The reply is, procure the services of another instructor. This, financial affairs totally forbid. In this dilemma, the last and really worst alternative is to cut down the time for recitation. Even then time may be wanting, perhaps, for two classes, one of which will be heard in the morning before class time, and the other after, or in the evening. With labor so varied, so onerous, so pressing, the teacher's task is not as thoroughly or efficiently performed as he could desire; and no one regrets more sincerely than he that this alternative has been forced upon him.

Our established system of education is broad and comprehensive, forming a complete series, viz.: the common school, the academy, the college. Their relationship is most intimate and mutual, each depending wholly or in part for its vigor and growth upon one or both the others. When this plan shall have been fully considered and the duties of its several gradations become clearly defined, it will be so complete as to be fully adequate to satisfy all the educational demands and necessities of a progressive and free people. But under the present regime there is continual friction and delay, arising in part from the fact that colleges and academies are teaching the same branches; and the latter are doing work in the elementary branches to some considerable extent. The work of common schools, as connected with this subject, to which I shall hereafter advert, is well understood. Its ultimate purpose is to furnish thorough discipline in the primary and elementary studies, beyond which scarcely one in fifty ever advances. The academy is to take the few who



desire a more extended course, and raise them to a higher and more advanced standard of learning, the better fitting them for life's duties, or rendering to those advancing to a college curriculum such helps as shall be of practical utility through the rest of their educational course and through life. Thus far along on the highway to profound erudition, it remains for the college to do the rest. The importance of this intermediate position in our growing educational system, held by academies, should not be underrated, nor can it be overrated. Colleges and all other higher institutions have long recognized and acknowledged the fact that their supply of students must come almost wholly from academies. In fact, there are but few other schools which claim to prepare boys, in any manner, for studies usually pursued during the first year in college. Hence, whatever of literary impulse or benefit, an academy or community receives from the energy and labor of a competent and thorough teacher, the colleges share to the fullest extent. The highest interests of education, the better support of all means and appliances to extend the same, and the greatest possible good to mankind demand for academies that qualification and tact, in the person of the principal, which characterizes and constitutes a true educator of youth. Again, besides furnishing a good drill in the elementary and fundamental branches, which are to continue in common use in all the relations and activities of business life, and which, in the main, form the ground-work for subsequent advancement, they not unfrequently create a thirst for a better and nearer acquaintance with facts and principles, thus acting as a strong mental stimulus, and inducing many to work on after a fair beginning is made, and provide for themselves a liberal education. Let me, for illustration, relate one example. Six years ago, a young man, the son of a not-well-to-do farmer, having received some means by enlistment in the late war, came to our academy and said that he desired only to fit himself for common-school teaching, as he had not much time to spare, and asked what studies he had better pursue. He commenced, of course, at the very rudiments. At the end of the year he left school.

After teaching one term he returned. This same young man to-day is a member of the "Senior class" of Hamilton College, has taken two prizes, and in point of proficiency, if I am not misinformed, stands among the first in his class.

This is one of the many instances which might be given to illustrate the power and influence of academic culture. Colleges drawing all, or nearly all, their material from academies, have a right to

expect young men well prepared to meet the standard of requirements for admission. That the present standard is too high, or too low, we shall not attempt to decide; but whatever it may be, let it be strictly adhered to, let there be no deviation from it, and students will begin to think more about their *preparation* for college than their actual *entrance*.

Academies then will have their own work to do, which they can do, and do thoroughly, if time and opportunity are given.

The preparation of students for advanced classes in college, which some academies practice, can only be done to the neglect of others. Such classes are usually small, oftener numbering two or three than above a half dozen; yet the time necessarily required to do justice, in any degree, to these few, deprives the many of those minute explanations and careful comparisons, the proper avenues for light to a clear understanding of those subjects, which form the basis of the intellectual structure, and which furnish all the means for prosecuting successfully the work of mental development.. The pay received from such classes is a mere pittance in comparison with the amount of labor given; and others *must* pay for what they do not receive. It is pleasant for teachers to have students in advanced studies, and their influence upon the school is salutary. But work properly belonging to colleges, and which, in academies, cannot be done without a great waste of time, had better go to its proper place.

Here the question naturally suggests itself, what is the real and legitimate academic sphere? As many answers might be given as there are minds, and doubtless would be, if called for. Cannot a uniform course of academic study be wrought out from this mass of conflicting ideas by a committee of competent teachers, who have experienced the evils of our present system, or rather the lack of any system? Much has been said, many opinions have been given, and some plans proposed, but the solution is far from being reached. To draw a dividing line between the two schools, in any manner satisfactory to either, must be the result of no ordinary forethought and labor; yet the question is of much importance and ought not to be overlooked.

We come now to the consideration of that part of our theme which bears directly upon our common schools. The number and popularity of these schools, and the great mass who are there educated, conclusively demand for them such care and provident oversight as shall render them most effectual for educating the children of our State. Professor Potter, in his work on "The Education of the

People," thus beautifully describes their office: "They should be so conducted as to promote health and vigor of body, and cultivate good manners and refined feelings. They should cherish the moral sentiment and cultivate habits of purity and truth. They should lay the foundation of good intellectual habits, and awaken a spirit of liberal culture. They should extend their benefits to all children not otherwise well instructed." That these conditions, not overdrawn, be fulfilled, the teaching must be in conformity to the best plans of mental, moral and religious development, and by those well versed upon these subjects. That many of our schools are furnished with such teachers is certain, but that all ought to be is equally so. It has long been an important feature in the work of academies to prepare students for successfully meeting the demands from our public schools for able and qualified teachers. That every teacher ought, by thorough and systematic study, and a special course of training, to be fitted for his work, all will concede.

To what institutions can the public reasonably look for furnishing this needed culture? The academies, fairly distributed over our State, nearly every county enjoying the benefits of one or more, and doing their work in the midst of rural districts, would seem the proper means for supplying this great desideratum. For proof that they have long been so regarded, I have only to quote the following from the Regents' Report of 1828: "Such being the present number, state and condition of academies throughout the country, they have become, in the opinion of the Regents, what it has always been desirable they should be, fit seminaries for imparting instruction in the higher branches of English education, and especially for qualifying teachers of common schools." Still later: "The Regents are decidedly of the opinion that the academies are the proper instruments for accomplishing the great object of supplying the common schools with teachers." As early as 1835, teachers' departments were legally organized in eight academies, one in each judicial district, "to promote the education of teachers." The salutary effect of this movement, adding to the teachers' ranks many capable and systematic laborers, soon led to the organizing and maintaining of other similar departments. Thus the good work went on, and April 13, 1855, such enactments were made as essentially adopted the present plan of operation. In 1844, a State Normal School was opened in this city, with the design, as expressed by law, to train and educate teachers for the common schools. To this one seven others have been added—now eight in all. These schools were to be a

prolific source, an inexhaustible fountain, whence would spring such numbers of superior common-school teachers as would make every household rejoice in their good words and works. That they have disappointed the public in the past, furnishes the best ground for belief that they will in the future. I do not wish to impugn our normal schools. I believe them to be thorough institutions. I am well aware that they have exerted a good influence upon the educational interests of the State; that they send forth many excellent teachers, whose hearts are imbued with the sentiment of doing good, and with minds well trained for stimulating and guiding the natural desire for knowledge. But where do we find these teachers? Not in our district schools, as expected, unless it be for a term or so, or until a more lucrative situation can be found elsewhere. The fact is, the pay of such schools is insufficient to procure the services of such a grade of teachers. From \$200 to \$400 a year is considered ample remuneration. Now, what normal graduate can be induced to work for such wages? I am not at all surprised that we do not find more of them in our common schools, but rather that we find any.

From the last report of the State Superintendent of Public Instruction, we learn that there are 12,038 school districts in the State, which annually employ 28,217 teachers; but the actual number required, when all the schools are in session, is 17,437. This clearly proves that a large proportion of those who engage in teaching do not make it a profession. We learn further, that of the whole number of districts, 11,372 are town districts, and employ 23,196 teachers; of which number 651 were instructed in the teachers' departments in academies, for one-third of the year, and 167 prepared in the State Normal Schools. This gives the normal departments two-and-three-fourths per cent for one year, and the normal schools three-fourths per cent for all past time. Normal graduates, admitting them all to be competent, will occasionally fall far short of what we term skillful instructors. The signal failure of ripe scholars, which often occurs in teaching, lies in the fact that they are incapacitated by nature for such work. The teacher's task is his own; a good education, wholesome rules of action, a familiarity with mental, moral and religious principles, are potent auxiliaries; but *success* lies in that perfect adaptation of the teacher to his work which enables him to observe the workings of mind, and make such demands upon it as will naturally develop its faculties. In view of such facts as we have recited, we come to this conclusion, that every county must, for the most part, educate its own teachers. But where and by whom can

this be done? I answer, in the academies and normal departments of the same, and by the teachers thereof, tried men and women, instructors of experience and of ripe scholarship. A large proportion of these institutions are under the management of distinguished scholars and educators, who are consecrated to their work by and through purer motive than pecuniary gain. Their position is far from being a sinecure. I claim for those preparing for the work of teaching, under *their* tuition, every aid essential to success, notwithstanding our normal schools. The "normal departments," as distributed through the State, reflect great credit upon the judgment and wisdom of the Board of Regents, under whose direction they were instituted. Their ultimate object was to benefit common schools. That they have been instrumental in elevating their standard and character is amply attested by the reports of our school commissioners, and especially by the fact that our best schools are proffered to members of them at rates above the average. I would, therefore, recommend that these normal departments be multiplied, and supported by something of that liberal policy and munificence which have been so freely extended to our normal schools.

The State should put such a department in every academy and union school, and it should be the duty of the school commissioner of the district to make such visitations and examinations as would satisfy him that they are conducted in the best interest of common schools. Let this plan be adopted, and a supply of qualified teachers can be furnished each year. Public sentiment is demanding more system in every department of labor, and I know of no better place to begin than in our schools. Academies, finally, by greater diligence and more faithfulness and thoroughness on the part of teachers, and under the care and guidance of the Regents, who have watched for more than three-fourths of a century their constant growth and labored for their highest welfare, are destined to achieve far better results in the future than they have in the past. I have endeavored to give a summary view of their work, as obtained from observation and experience. Maturer thought will, doubtless, develop that much has been omitted which might properly, and perhaps profitably, have been added. But in view of the increasing interest which attaches to every suggestion of needed improvement in the means or methods of mental culture, we trust errors will be charitably overlooked, when the reflection is reached that we are aiming at reform profitable to science, to ourselves and to those who are to follow us

## SCHOOL APPARATUS.

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By SOLOMON SIAS, A. M., M. D.,

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I hold it true that apparatus is needed in the school room for everyday use in illustrating the common as well as the difficult propositions and curious phenomena in science, and I believe it is equally true that our manufacturers are too high in prices for the common articles, although, perhaps, cheap enough for the costlier pieces that require more skillful workmen and longer time to make.

The time has been when geography was taught without globes, maps or pictures. Well do I remember the introduction of atlases into our district school, and with what avidity I studied the one my father got for me; it was a god-send to save the fool's back from many stripes. When Mattison's astronomical charts were published, what a spur they gave to the study of astronomy, and how much better they fixed the ideas of the science in the student's mind. And now we have Johnson's philosophical charts, and I know not how many others. But we want something better than mere charts in teaching the sciences; they may do for the lazy man, but a teacher with a lazy diathesis has no more business in the school room than a blind man has to be an engine driver on our railroads. We want apparatus, not to put in cases to represent the wealth of an institution and make a figure in the yearly catalogue, but to use, use daily, use in the classes. The magnificent planetariums, costly telescopes, large globes, glass plates and lacquered brass may look well at the advent of the annual board of visitors, but they are the mere wax figures of an intellectual museum; they never speak to the student, and the breathing Zouave has no throbbing heart. The pupil that has no atlas with which to study the geography lesson at home, will make poor work with the outline maps on the school room walls, no matter how plain or perfect the maps may be; so the student that only once a term, at the teacher's convenience, sees a grand display of electric or pneumatic experiments in the public lecture, has but a poor understanding of that mysterious agent the storm-cloud awakes in wrath, or of the blue aerial sea whose currents cool the fevered brow.



Let us commence with geography. Although we are greatly advanced in knowledge, and our text-books have been much improved within the past few years, yet we are more theoretical than practical, dealing more in abstract than concrete knowledge. If it is so with teachers, how is it with pupils? Why do we have so few that like the study, appreciate its value, or can pass a respectable examination in it? It seems, even to our adult minds, a mighty thing for the subterraneous fires to lift the lava to the volcano's mountain-crater, and much easier for it to pour out the mass from an opening on the side or in some valley; yet we talk of the relative height of the mountains with the vast dimensions of earth, and can tell the fractional part they bear. Do we realize it? Having occasion one day in a geology class to speak of the crust of earth in connection with the statement that it was about fifty miles in thickness, I asked what fraction that would be of the semi-diameter of earth. The response was immediately made, the  $\frac{1}{80}$ th part. In order to assist them in grasping the idea of comparative thickness, I asked: "Suppose, with a line 6 $\frac{3}{4}$  feet long, I should draw a circle on the floor, how thick would the crust be?" Looking down upon the floor, as if to construct an ideal circle, they replied, "one inch." I then asked, "How high would the highest mountains be?" "About the tenth of an inch." "And how high Vesuvius?" "About the fiftieth of an inch." Although their answers had been given with considerable promptness, I was not satisfied they had attained the full idea; I therefore constructed a chart that evening, with the given radius, and hung it in the school room. Judging from the manner in which my advanced students studied the chart the next day, and commented upon it, I am confident they comprehended for the first time the size of earth and the relative height of the mountains.

I do not wish to be fault-finding, an idle dreamer, nor one asking impossibilities; but it does seem to me we need geographical maps and charts, constructed on a uniform scale, to correctly convey the relative size and position of different countries and places. Our present ones are good enough to show their form, but are wholly inadequate to convey any idea of comparative size, doing as much harm in this respect as they do good in localizing places. In some respects we might as well have for school-room use the genuine Chinese maps, which put down that country correctly enough, but dwarf surrounding ones into pigmy provinces or distant islands. I know it is claimed if we had a uniform scale it would turn our atlases into a collection of mammoth posters; but it need not be; let us first

have each of the countries, continents and islands drawn on the same scale, respectable in size; then, if wished, have study and reference maps drawn on any convenient scale, the same as we now have town, county and State maps hanging in our halls and offices. What I seriously protest against is the multiplicity of scales in our atlases and in our wall maps. If Europe is only half as large as North America, do not for the mere sake of uniformity in size of maps, spread it out as large, for the young mind will imbibe the idea of equality in size, rather than notice the increased width of space between the geographical lines.

Again, if possible, give us raised or embossed maps that shall show the leading features of physical development. Drawn on a uniform scale, let the mountains of each country loom up their relative height and the valleys wind among them. In our present knowledge and capability of giving paper a permanent form, it does not seem to be an impossibility, nor that the price need be exorbitant. I have found Gage's embossed map of Palestine far better in giving Sabbath-school children an idea of that now desolated land and the cold winds of Lebanon, than all the descriptions of our travelers and the engravings of our artists. As an illustration of the efficacy of this kind of maps, and perhaps giving an idea for new pieces of apparatus, I would give the following: Finding it difficult one term for my primary class to remember and correctly apply the strange words "promontory," "cape," "bay," "island," etc., I undertook to manufacture a piece of apparatus to show the appearance of each. I cut out the map of North America from a used-up atlas and pasted it on a board. Then carefully cutting through the board, as I followed the shore line of the continent, I succeeded in getting a tolerably good outline of the whole in wood. Placing this in a large square dish and holding it down I poured water in, taking care not to overflow the continent. The result was I had bays, gulfs, capes, and all the divisions of land and water in miniature before them. I spoiled it afterwards in endeavoring to manufacture the Rocky Mountains. Here, however, is an idea that may be useful and practical, and while I file here my caveat with you, I give all the privilege of making this and similar articles, provided you will allow me to tinker out one for myself. We need some such articles for our schools. Raised globes, however, are a ludicrous humbug, like papa's hat and vest on the toddling child. And the grandest humbug of all is putting a small globe inside of a glass sphere painted over with the antiquated constellations of astronomy, and palming it off upon children as giving an



idea of the earth and heavens. I have never yet seen grown or ungrown children that could so far abstract themselves from an outside corporeal existence as to get inside the glass.

In natural philosophy we are more fortunate in the number, variety and usefulness of the articles given us, but at the present prices it would require the gold-producing power of a Midas to thoroughly equip an academy. There is too much looking at show and too little at usefulness in the purchase of apparatus by trustees and founders, and our manufacturers pander too much to the ostentatious pride of the buyer. The new articles added to the manufacturer's list, and heralded to every academy, are not those designed to illustrate common principles, but to show the unsettled discoveries of some fanciful theorist; give to the wealthy scientist the means of repeating the experiments, or to place before the eager, itching eyes of our modern Athenians these new things that are going to upset the universe and give us the spontaneous generation of a higher order. What we need is something to illustrate the common principles, something the school-boy can handle without danger, thus testing the statement of this book and fixing it with the soul's photography on the fadeless tablets of the mind. . As we give the pupil a map to use while studying geography, thus letting the eye assist the written word in fixing the position of a river and locating each city and town along its banks, so should we do in philosophy, and its truths would no longer be vague, uncomprehended statements. A few terms ago and the lesson I gave for the morrow included the pendulum; I dreaded it, for with all my labor I had never succeeded in making the majority of a class understand the laws so that they could promptly apply them with anything like correctness. After school, I went into the workshop and made a rude piece of apparatus somewhat similar to the one figured in Steele's Philosophy, and the next day, placing it in the school room, told the class to work out their lessons with it if they wished. It was amusing to watch one after another experimenting with it, but when the time came for recitation there was not one that could not correctly tell the effect of length on the vibrations and the relations existing between the two. Again, plain as it may seem to us here, how many times have we found it difficult for pupils to grasp the idea—for they would remember it if they did—that gravity, light and heat decrease as the *square* of distance increases. The figure in our text-books to illustrate this does all that a mere figure can to show it, but still it seems to the beginner that if the object is removed to twice the distance, it ought to be affected at least half as much. To

illustrate the law, I made with three small pieces of board, a peg and string, the simplest kind of an article, but now they could see it for themselves, and I have experienced no difficulty since in impressing the idea on the youngest mind. So is it with magnetism; you may talk till wearied out, in the plainest kind of words, and in the most familiar manner, about the effect produced, but you can accomplish more in five minutes with a twenty-five cent magnet, bought in a toy-shop, than in an hour's talk; not, however, by using it yourself, but by letting the class play with it. What we need, then, in philosophy is for our ingenious teachers to devise from time to time little articles that will be useful in the school room for illustration, take out their letters patent from the high courts of Jehovah, not those of man, put the contrivance into the hands of some enterprising manufacturer, and let it go forth to bless the world. What we need among our manufacturers is one thinking less of money than usefulness, who is willing to make the articles in a plain, substantial manner, and then furnish them at a price that shall not be more than the Dutchman's one per cent on cost. McAllister has done a good thing toward benefiting our schools, in the production of his "Household Microscope." Although useless to the professional microscopist in his investigations, it possesses all the essentials of the higher priced instruments, and carries as high powers as are available for class illustration. If our schools, instead of purchasing a twenty-five or sixty-dollar instrument to put in the show-case, and seldom, if ever, use, would procure a corresponding number of these, and allow the scholars to use them in the school room, or, perhaps, even take them under certain restrictions to their own rooms, they would do vastly more for the improvement of the mind than they can now accomplish, and lead the pupil to a better acquaintance with the merits and beautiful works of God, with the splendor of those tiny works painted with God's pencil dipped in his own bright tints.

I know, from experience, that it is laborious for the teacher to have class experiments, to have his apparatus ready for use at all times, to perform some experiments to-day and others to-morrow, cleaning and replacing in their cases each day the articles used, and that oftentimes this is rendered yet more laborious by the ill arrangement of apparatus and recitation rooms, sometimes even being placed in different parts of the building; yet I know it can be done, and, if the teacher would do his whole duty to the class, he must endure the toil, for it is this oft-repeated class experimenting that fixes the principles in the student's mind. I know also the great value of the student's experi

menting by himself, or in the presence of his teacher. It is our students that are to be the future teachers, and how poorly are they prepared to enter an institution as teachers of natural science, having merely witnessed experiments, never having put a hand to an air pump, learned the little technicalities of an electrical machine, or manufactured anything but words of gas. Many a disused or broken article may be traced to the teacher's inexperience rather than inclination. To remedy this and assist in the work of education, give us plain, substantial apparatus, convertible into a variety of uses, with but little danger of breaking or getting out of order, having the screw threads cut with the same die and plate, as far as possible, and place the apparatus itself in the school room so as to be readily accessible. In recitation let the scholars describe some piece and some experiment that can be performed with it. Then produce the article and let some one perform the experiment. If no article is described in the text-book, have a student state the principle as he understands it, not in memorized language—a parrot could do that—then let the teacher produce some piece of apparatus, and with an experiment demonstrate the truth as it is. If the pupil has been mistaken he will never forget the correction.

In astronomy we have but little apparatus worthy of use. I would wholly discard orreries, planetariums, and all of that genus, as they can never truthfully represent the relative size, distance, motions, gravity, light or heat of the bodies. The nearest approximation I have is this: Commencing near one end of the philosophical room, fix little hooks in the ceiling, allowing an inch for a million of miles. Place one thirty-seven inches from the starting point, another five feet nine inches, the next seven feet eight inches, another a trifle over twelve feet, and so on till the room is spanned. From these hooks, by delicate threads, I hang small balls at as nearly the same height from the floor as possible, not, however, exceeding the average eye of the class. To get the position of the planets, not represented in the room, I let the class calculate the distance of each, and then we endeavor to fix it with some surrounding object whose distance I have previously calculated. To form an idea of the actual distance of the earth from the sun, I take a piece of paper one inch wide, mark it off into squares. In the presence of the class I put 100 dots in one of the squares with my pencil, then let them calculate how long the paper ribbon must be to hold enough dots to represent the distance. Having ascertained it, we anchor some well known village to us with our ærial ribbon.

To illustrate astronomy we need some simple piece of movable apparatus to represent the visual angle and the effect distance has on

apparent size ; another to show that it makes no difference how large or small a circle may be with which angles are measured ; another to show conjunctions, transit and opposition ; another to illustrate the cause and effect of the precession of the equinoxes. But while we have teachers ingenious enough to devise these, we have not manufacturers to produce them. Some great lunarian-helioglobulus may be invented, representing in distorted distance, and at any inclined, horizontal or perpendicular angle the motions of a misproportioned sun, moon or water, and out will come flaming notices from the manufacturer, describing its beauties, intricacy and cost. Or, perhaps, some cog-wheeled, rattling ellipticon is devised, to give on a twelve-inch radius an exact representation of the earth in its motion round the sun, accompanied with the changing moon, and enveloped with an elongated revolving tidal wave of tinted glass, while painted tin circles mark the divisions between day and night, and mysterious brass figures point to the shifting hours and flying stars. A few months pass and the manufacturer finds the costly thing a useless waste upon his hands. No wonder he is discouraged, and henceforth kindly declines making anything but the "old stand-bys," following the old patterns. Yet improvements gradually creep in and are adopted by manufacturers and users, despite of failure and prejudices. Wightman did a good thing when he discarded the double-barreled, reciprocating lever air-pump, but Nellegar and Chamberlain did a better when they fixed his flying cylinder and worked it like a pump. Let them go on in the good work, improve and simplify in other cases, devise new articles, reduce the price until their pieces become household property, and make the attachments so that the articles procured from one can be connected with those of the other. Let us assist them in their useful labor, suggest improvements, changes, articles, and perhaps before our time is over we shall see the school room well equipped, and much that is now an abstract idea, half developed in the student's mind, demonstrated with appropriate pieces. As there is no royal road to science, so there should be no monopoly in apparatus. Teachers and manufacturers should work together in harmony. The plea for high prices reminds us of the objections to postal reduction or the cry of the Ephesians at Diana's overthrow, but if a change can be wrought, the quantity of apparatus increased, so that like the stereoscope it becomes a household article, our manufacturers will be benefited, students assisted, the labor of the teacher lessened, the efficiency of our schools increased, and the morning star of our hope give way to the brighter light of an intellectual day.

## THE CO-RELATION OF ACADEMIES AND UNIVERSITIES.

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By WESLEY C. GINN, A. M.,  
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Educators have written much on the comparative decline of collegiate education in this country, and especially in the older States, and the question has frequently been asked, "What has occasioned this decline, and what measures are necessary to turn back the current of public action and lead the thoughts and aspirations of the young more generally to the acquisition of a liberal education?"

Turning away from the great leading causes,—the rapid expansion of our country, its wonderful development of new resources, the inordinate love of gain thus inspired, and the excessive value set upon wealth as the basis of social respectability, may we not find, in the *faults* of our *educational system*, one cause why the public mind so stubbornly refuses to be led steadily forward and to keep pace with the expansion of our population, and of the means for procuring a more liberal culture?

It is necessary, not only, that the people be brought to feel that a thing is good, but, on account of its inestimable worth and present advantage, an irresistible desire or an irrepressible moral conviction must be aroused in their minds that shall urge them on to the attainment of the desired object.

A single consideration, thrown out in a detached form, however it may inspire, for the moment, to activity, is not sufficient to hold the mind steadily in pursuit of knowledge; but all the considerations must be brought to bear upon it, each in its logical order, that it may be kept constantly at its task, and led along by natural steps of advancement to the accomplishment of its purpose.

A single consideration out of place, like a wheel of a system out of gear, may break the connection and prevent the transmission of the force to the proper point of application, and, as a consequence, failure more or less complete must be the result.

May we not, in investigating the relations existing between academies and colleges in our State, find some such fault, destroying the

harmony of the system and preventing the accomplishment of the work for which these institutions were established?

The academy must have its definite field of labor, which the college and the university must not invade; and its pupils must always be looking forward to the next higher grade as a position clearly and definitely above their present stand-point. In the academy, the student must not only be instructed, but he must be held under the personal supervision of some one who is capable of directing his energies, and under whose direction such a state of mental discipline may be acquired as will enable him to meet successfully the responsibilities incumbent upon him as he enters the university. His principal duties there are to learn the mastery of himself, that power of application that will give him present success, and make him victor in the conflicts awaiting him in the future, and the university must not offer him any inducement that will call him away from this preparation before it is complete.

The public high schools, both to the east and west of us, have two well defined courses laid down for their students: a classical course, intended as a preparation for the same course in college, and a general or English course, aiming at a knowledge of the Latin or the modern languages, and of such other studies as will produce in the mind of the student the same amount of discipline, the same power to accomplish, as the classical course is intended to impart.

These high schools say, in effect, "Thus far we will guaranty the preparation of our students, and then we will commit their interests to the fuller opportunities of the college."

Yale and Harvard, the leading universities of New England, and indeed all the other colleges of that section, accept the guaranty and agree to take the student where the high school leaves him, and carry him through to the completion of his university work.

They frame their courses accordingly. The requirements for admission to the classical course in Greek and mathematics are about the same in all the colleges, while in Latin, Harvard's requirements exceed those of Yale by six books of Virgil, three of Cæsar's Commentaries, and three orations of Cicero. Harvard requires that those who present themselves for admission to her Lawrence scientific school shall be graduates, or shall have done the same amount of work as graduates of the classical or English departments of the public high school. Yale, for admission to the Sheffield scientific school, more explicitly requires Davies' Bourdon's Algebra, to general theory of equations; in Geometry, nine books of Davies' Legendre; Plane



Trigonometry, including analytical trigonometry; common English branches, including United States History, and an acquaintance with the Latin language sufficient to read and construe some classical author, and a corresponding knowledge of the Latin grammar.

The University of Michigan, the best known of our western colleges, makes about the same demand as an average New England college, for admission to the classical department. In her scientific course, while falling somewhat below Yale and Harvard in mathematical requirements, and making no demand for languages at present, for 1873 she requires a preparation in French on Fasquelle's French grammar and one-half of Otto's French reader; also, in the sciences — on Botany, through Vegetable Anatomy and Physiology; on Natural Philosophy; on Zoölogy, through Comparative Anatomy and Physiology, and on Dana's Text-book of Geology.

Here we have the demand of the leading eastern and western universities, and in these demands we see an especial attempt to elevate the standard of admission to the scientific, to the same grade of scholarship as is required for the classical course. In other words, these universities are striving to place admission to their *various* departments of study upon the same level of mental discipline, in order that the four years of university study and opportunity shall place every graduate at the same stage of educational advancement. Their object is to enable American students to realize in American universities the same advantages as those which they now seek in continental Europe. And although years must pass before we can hope for a complete realization of this purpose, yet we all hail the effort as a promise of ultimate fulfillment.

Turning to our own State, the empire State in population, in wealth, in commerce and in politics, though she has many old and honorable institutions, which have done excellent service in the cause of general education yet she has hardly one that challenges comparison with old Harvard and Yale; not one, so far as I know, that lays the same demands upon her students, at admission to all departments, as does the University of Michigan.

We have one university of young, vigorous growth and excellent promise, which in four years has attained a national reputation; yet, while bearing the name of university, a name synonymous with severest discipline, the richest culture, the broadest and deepest scholarship, she enters, in a measure, into competition with the academies, offering to admit to her scientific and special courses students prepared only in the common English and in algebra to quadratics.

While the union high schools throughout the State, and a vast majority of the academies, offer in their English courses a preparation for the scientific commensurate with that which they offer for the classical department, yet this university refuses, for the present, this preparation, and receives students to university honors two years before they are prepared to do university duty. I refer to this university, as I did to Harvard and Yale, because to-day it occupies a more prominent position before the country than any other like institution in the State; and because, on account of its princely endowment and the spirit of reform that animates its management, it will undoubtedly be the first, or among the first, to rise to the true proportions of a fully developed university. It cannot too soon break away from a primary instruction, which in no wise belongs to it, and take its proper position at the head of our educational system,—a university in fact, as it is in name. I recognize the generous spirit that laid these broad foundations and opened wide her portals to almost every grade of scholarship, and invited every taste and talent to development amidst her rich and varied resources.

I bow with reverence before that love for young manhood that gathered within its embrace the young men of every grade of society, and said to them, come, I have opened a fountain where all may slake their thirst for knowledge; that went to the farm, into the shop and the factory, and to all the varied pursuits of life, to entice the young to a fuller preparation for their life-work. I bow with reverence and gratitude in the presence of this noble generosity.

I would only have the question settled whether it is well to admit scholars of this grade of scholarship to the classes of the university. That many of them need the opportunities here afforded cannot for a moment be questioned; but should they not be furnished by a different class of schools, the industrial schools, trade schools, polytechnic schools and the like,—the same class of institutions to which such work is assigned abroad?

In such schools, young men and young women, who have no aspiration or purpose for a liberal education, might obtain that training in the useful and mechanic arts essential to success in their several pursuits. Let these schools be called by their right names, and let their certificates of graduation attest simply, in the *name* of the institution which they bear, the kind and amount of work accomplished.

It is unjust to academies that an institution of such rank as a great university should allure, by a low standard of admission, the students



from these preparatory schools, before they have finished their work of preparation.

We all know the tendency of our young people to hurry through the preliminary work of the scholar and get out into the world of business as soon as possible. This tendency we all deplore; and it should be the earnest effort of our lives, as teachers, to check its growth, and by every healthful incitement to inspire in the minds of our pupils an aspiration, kindled into an unflinching purpose, to prepare themselves to meet faithfully the demands of society, to go out inspired with the discipline and clad with the armor that shall make them equal to all the responsibilities to which God, in his love and wisdom, has called them.

We can easily understand how an institution of national reputation, by playing upon this tendency, would let down the standard of education and defeat the object for which universities are established. A spirit of unrest is introduced into the academy, and the boys, allured by the desire of being reckoned among university students, slip from the control and discipline of the academy to take their places as men, without any personal direction, amidst duties, associations and influences for which they are utterly unprepared. Not only are these influences placed before our boys, but the young ladies, having now the same opportunities opened to them, also feel the ambitious desire to shine in the circles of higher literary associations.

Thus the rank of the academy is degraded, its influence and respectability in society is abridged, and the whole educational system is impaired.

A low standard of admission necessarily implies a low grade of graduation. Not that the work is not well done, so far as it goes; but as only four years' work can be done in the four years' course, if a student enters two years too early, he necessarily graduates two years before he is honestly prepared to graduate.

The amount of work required to be done in a university, and the manner in which instruction is there given, principally by lectures, render it necessary that the student shall have acquired, under the personal supervision of a teacher in the smaller classes of the academy, those habits of study and that mental consistency which will enable him to grapple successfully with the severe labor of his new situation.

A large proportion of students, who have only made tolerable advancement in the common English branches and algebra, whose characters both as scholars and men are unformed, must find themselves inadequate to these tasks, and will lose heart and fall out by

the way, and forever give up their long-cherished hope—a hope that might have been realized in the fruition of a glorious manhood, had the foundation been well laid. Mature scholarship can only be reached by regular steps of advancement. Every chasm must be bridged over by hard work. No part of that work can be left undone, and the solid foundation must be felt at every step. You cannot take a scholar out of the primary school and make a university student of him at once.

The kind of work to be done in the university renders a certain preparation necessary. Language is to be learned, and yet the student's only outfit is a very slight acquaintance with his mother tongue. If not a classical student, he should have at least two years in the modern languages or in the Latin. The sciences are to be learned, with all their technicalities. To do this work thoroughly and well, are not some such requirements as those of the University of Michigan for 1873 needed, in order that the student may be prepared to make a proper use of the material given him in the lectures on the various branches of this department of study?

In consequence of the academy and the university occupying common ground, a double set of teachers must be paid to do the same work, necessitating an expenditure without additional satisfactory results. This primary work does not belong to the university, and an economical use of the public money forbids that it should be required to do it. In the great lack of funds for carrying forward the educational enterprises of the State, no public interest requires a more rigid economy or a wiser outlay of money.

It is unfair that new institutions, bearing the same name and rank, should bid against the old and reputable colleges of the State, by offering to admit scholars to any of their departments on a lower basis than that established in the older institutions.

And just here I would plead for a common standard for all institutions of the same name, whether established for the education of males or females. We have collegiate institutes and female colleges, and a multiplicity of other institutions bearing in some way the name of college, which have very little in their instruction or opportunities that entitle them to a name which is intended to give them character in the public estimation above their true merits.

They are scattering their diplomas like the leaves of the forest and just about as indiscriminately. These diplomas bear no higher relation to the parchment of the true university than the leaf of the tree bears to the rich, ripe fruit. Such schools are calculated to delude the

ignorant by bidding for patronage on false pretenses, by crowning their scholars with a wreath that will wither in the first ray of sunlight, instead of the imperishable laurel.

If any men should be honest, they are the educators of the land ; if any institutions should be just what they profess to be, they are our institutions of learning, and especially those of higher education. Honesty, square dealing with the public and with each other, should be declared in every act and profession. All sensational advertising should be left with mountebanks, where it belongs, and where it will be seen in its true light. It is undignified, unprofessional. If it seems to become necessary to any institutions, it is only because they do not meet the public demand and call out the necessary patronage, or because there is a surplus of them on the market. If too many, then let them die decently, that others may live vigorously. Let each classification be part of a complete system, each wheel matching perfectly into its fellow, and carrying forward the work to a grand completion.

The academy should not encroach upon the curriculum of the college unless to meet a local want ; and the university, which is not local, should not encroach upon the academy, but by every kind of encouragement should strive to build it up, to extend its usefulness and its power, and make it such a preparatory school as the wants of the State demand.

Let this young giant of a university, clad in such matchless resources and glorious possibilities, step boldly to the front, and, no longer dallying with the liliputian work of the academy, assume the grand prerogatives of a national university, with no competitor in the race that shall dare to question his supremacy ; and then, with the academies and union schools pressing forward in the work to supply the partially finished material, his strong, skillful hand shall take it up and send forth the polished bolts of thought in the form of cultivated manhood and womanhood, that shall make this the empire State in letters and art, as it is in political greatness and commercial prosperity and renown.

## THE NEW DEPARTURE IN EDUCATION.

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BY ERASTUS F. BULLARD, A. M.,  
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With all the wisdom and experience of the past, we do not yet venture to say that we are the wisest men that have lived, that we perform the noblest deeds the world has yet seen. Do we, indeed, wholly avoid the failures of our fathers? How much do we improve upon their successes? Or has the tide of discovery and invention borne us so far in advance of them, that we must fail to see and shun their vices, or to appreciate and practice their virtues?

Were not our intellectual fathers men of faith, men of new ideas, men of progress? And were they to appear among us to-day, should we have to plead excuse for what we have done? Would they upbraid us for our faithlessness; or would they rejoice in our work and recognize in us their rightful successors? Surely no one will contend that no departure has been taken from the course so long pursued by the revered teachers of the past, for it seems marked and decided. But it may be asked why was any departure at all necessary from a system which confessedly produced the ripest scholars, the ablest statesmen, the most distinguished inventors the world has yet seen, from a system which gave to literature its highest excellence and to history its brightest ornaments? Shall we answer that discovery and invention have changed the conditions of life and infinitely increased the wants of man? The railroad does, indeed, reach from sea to sea. The telegraph binds the continents together. But does discovery or invention change the nature and constitution of mind? Do railroads and telegraphs change the laws of intellectual development and growth? Is not the true end of all education eternally the same? Shall we answer that the system of our fathers accomplished its work, that it had its day? But its work is still far from its final accomplishment, and we shall not live to see the full brightness of its day. Shall we say that the spirit of the age demanded it? But true scholarship does not pander to the spirit of the age. It rather leads the age and gives form and tone to its spirit.

No, we will not answer thus. The new system, after all, is not so much a departure from, as a development and growth of the old, in accordance with natural and uniform law. It is the tree with its wide spreading branches of which the old was the promise. The old system contained within itself all the principles essential for its life and growth. They were, by their nature, living and active, and when applied by the methods of the new philosophy they inevitably led to new discovery. Every new discovery supplied a new instrument for use and opened a new field for investigation. The process of discovery continued until our instruments became so multiplied, no single hand could use them all, our fields for investigation so widened, the sun does not cease to shine upon them.

It was once possible to bring within a single course all that was knowable or worth knowing. To this end the original university was constructed. It accomplished its purpose long and well, and became fixed in form and method. Assuming that it had gathered up all that was worth knowing, it proceeded as though there was no more to be known. It was loth to recognize any value in new discoveries. It was hostile to innovation throughout. In vain did the advocates of the new sciences appeal to the old university. In vain did they seek admission within its walls. What remained to be done? The world could not afford to lose the results of science. It had use for them; and they were already recognized as chief agents in the progress and civilization of the present. Should the old be left to itself and new schools be formed wholly on the basis of science? But one would educate for the past and the other might not educate at all, and the two would still continue opposing forces. It seems that no other course remained than to return to the design of the original university. Its plan is enlarged so as to admit all that is worth knowing, both of the past and present. Kindred studies are grouped together, forming well defined courses. They are placed in natural and harmonious relation. The new invigorates and liberalizes the old. The old breathes into the new the spirit of order, refinement and beauty.

It may now be asked, to what end was this union made? In what spirit is the work now progressing? Modern science is, in fact, a new revelation to man. It came almost unsought, and so unexpected that man himself was nearly confounded with the magnitude and importance of the truth revealed. It is a revelation based not on faith nor speculation, but on actual fact. It is wholly material in its means and ends. Its results we see and feel. It has already confer-

red the richest material blessings. It is not wholly strange, then, that it has so nearly supplanted in the minds of some the revelation of the written word. It was only natural that suspicion was awakened as to the value of a system whose chief end is man's intellectual and spiritual excellence. Comparing practical results, it was only natural that an intensely practical age should demand a new system or a reconstruction of the old on a new basis. The spirit and needs of the age forced a compliance with the demand. And as reform naturally tends to extravagance, so the tide of success bore the advocates of the new system to the far extreme. They became more hostile to the old than the old was to the new. The classics and pure mathematics can find no place in their system. These things were good enough for monks and dreaming philosophers of the past; but the present has no need of them. Liberal culture is no longer a worthy end of study. The demand is for practical education, so-called, for successful men, for experts in the paying professions. These demands were so far seconded by the mercenary spirit of the age, that the people have really come to believe that education is no more than a means for gain, that the highest and most desired of all is that which secures the richest pecuniary results.

We submit the questions: to what extent did this spirit prevail in the construction of the new system? to what extent is it now shaping its course? We now notice briefly what seem to be some of the aims and tendencies of the new system.

First it aims to be comprehensive. The new university, faithful to the original idea, seeks to include all that is knowable, to garner within its courses all the treasures of learning. Its range of studies extends from the highest schools of philosophy to mechanics and agriculture. It invites all from the high plains of power and wealth and from the low valleys of human want and weakness to walk together, until they all shall come to share alike the choicest fruits of God's vineyard. It recognizes woman, too, in her rights, her capacities, her destiny, as equal to man; not, however, by the right of wife or sister or citizen, but by her own right, by the right of the better soul, by the sacred right of God's own child.

But does not this comprehensiveness tend to dissipate directness of aim and effort on the part of the student? Does he not often attempt to secure the best of the whole, while the allotted time is not sufficient for thoroughness in a single course? While he would traverse the whole range, the times do not allow him to gather up the fruits of a single field before they press him into service. He snatches



here and there what he deems will serve him best in the immediate activities of life, while he is led to regard with disfavor and contempt those studies which have proved of highest value for thorough discipline and filled the largest place in true culture. And is it denied that there is still a growing tendency to regard the chief office of the university as being rather to train for a profession or a trade than to educate for a life?

We notice, in the second place, that the new system aims to be practical, to fully satisfy all the demands of an intensely practical age.

To be practical should be, and, indeed, is the aim of every true system of education. But it should be no less an aim fully to comprehend and closely adhere to the true meaning of the term, practical. In its true meaning, it is a word of the choicest import. In its right sense, it is making the truest and highest ideal the actual. It is carrying results into the varied relations of life and making them contribute to the success and comfort and happiness of man. The highest practical finds its chief end in man's highest development as an intellectual and spiritual being. But have not modern educators come to use the term in a somewhat different sense? Is this the meaning implied in the popular clamor for "Practical Education?" Does not the term, as applied to education, now rather imply the acquisition of the most knowledge by the shortest process and with the least labor, the substitution of results for regular deductions, of sagacity and cunning for the products of study and effort, the securing of the richest gains by whatever means? And has it not come to be the commonest question of the day, "what practical good is there in such a course of study?"

Now what are the tendencies of this practical aim in the new system of education?

First it seems to lead into error as to what education really is. The people, at least, have, very generally, come to believe that education is nothing more than the mere acquisition of truth, that the main office of the teacher is simply to give, that the mind itself is a sort of receptacle to be filled, and that its highest office is to devise means for gain.

A second tendency seems to lead into error as to the best process of educating. As education is thought to be no more than the mere acquisition of truth, so that process by which the mind acquires the most easily and rapidly is thought to be the most effective and desirable. Hence methods are sought by which the greatest *quantity* can be secured with the greatest ease and in the shortest time. The Lec-

ture Method and the "Objective Method," so called, with other modern methods of instruction, seem to present to the mind what it needs to seek for itself, and largely to substitute the work of the teacher for that of the scholar.

A third tendency of this practical aim seems to lead into error as to the true end and office of education. "What is the practical use of it?" "Does it pay?" are now the commonest questions of the day. These are the questions which the earnest teacher has to answer daily and hourly. And when he can convince the parent that it *does pay*, he has secured his boy for the high school and for the college. The teacher speaks to little or no purpose when he says that the chief end of all true education is found in man himself, that its chief office is to fit him to live as becomes a man, to qualify him to perform well all the duties belonging to a true manhood, to elevate and refine humanity, to enable man to understand his true relation to his fellow-man and to his God, to comprehend, appreciate and gain the true, the beautiful and the good, to enable the mind to follow upward in unwearied search the connecting links which unite the finite to the infinite. No, this will not pay. Such an education will not fit my boy for business, to make money, to speculate in stocks. I wish to give my son a *practical* education. Such is the gross error the people have fallen into, and for it, it seems that the new system, in its intensely practical aim, is mainly responsible.

We notice, in the third place, that the new system aims at economy. In this, it meets the demands of the times. The day has come when man must soon know the ways in which he would walk. The fullness of life urgently calls him out to countless activities. He cannot indulge in the sweets of pleasure or study when duty summons him on every side. If he delay too long in the discipline of his forces, others will enter the contest before him and bear off the palm of victory in his stead. Economy, then, both in money and time, is of so much consequence to the student, that there seems to be a strong tendency to make the education of the present as quick and cheap as possible. The university, by its lecture method, its elective system, and by combining the workshop with the study, brings all that is deemed necessary within the reach of the humblest seeker, and makes it as short and cheap as it can. The Normal School would substitute its course for that of the university, and engages to do a better work at far less expense in money and time. The Commercial College, so called, makes the fairest promise of all, and does, indeed, do the *cheapest* work of all. Economy is, indeed, a worthy aim in every



department of labor. But there is surely no economy so wretched as that which tends to weaken the mind, pervert the judgment, and lead the student to sacrifice true culture in order to save time and money. It is believed that the idea which has become so prevalent, that all necessary education can be secured in a short time and at small expense, is highly adverse to sound scholarship. It is with this view that the advocates of practical education, so called, work mischief continually, in leading young men to substitute their visionary promises for the substantial benefits of the higher courses of instruction.

To educate requires time. It is a slow and gradual process which cannot be hastened. It can proceed no faster than the mind matures. Nature rebels against force, and nowhere does she make a more stubborn resistance than against an artificial or unnatural process of mental development. It is only by many years of fostering care, of systematic training, that the mind can gain the full strength and use of its powers, that the child can be brought to the full stature of manhood.

So we think it a question which we now need consider, whether diversity of pursuits tends so much to success in scholarship as to dissipation of aim and effort, or whether it is possible for the student to secure the highest attainments in scholarship, while he enriches himself by the products of mechanics and agriculture.

It remains for the educators of the present to teach that life is more than a trade, that the things most truly practical in it are those which contribute most to happiness, virtue and truth. They need to teach the world as well as the individual what a true culture is, something of what it costs, the best process of securing it, its chief end and office, and to show by the fruits of their own lives that it *does pay* in the richest possible returns. And when this is fully accomplished, will there, then, be need of still another departure in education?

## MODIFICATIONS OF THE ESTABLISHED CURRICULUM REQUISITE AND LEGITIMATE IN COLLEGES FOR YOUNG WOMEN.

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The very statement of the subject here announced takes for granted that Colleges are requisite for young women; that they are to be distinct from those for young men; and that in them special modifications of the established curriculum will be both requisite and legitimate. These postulates demand passing review that the modifications proposed may be rightly appreciated.

The demand for higher and truly collegiate education has been awakened within the last twenty years in our own country and in Europe, just in proportion as the recognition of increased popular representation in government has prevailed. In England simultaneously with increased extension of suffrage the voice of public sentiment called for the establishment of a University Course of Lectures for Women. At Hitchin, a location midway between London and Cambridge, an institution was established at which the professors from both centers met to give courses of lectures. During the past year, the professors at London have resolved to furnish in the city itself a course of lectures for young women; the ladies providing for themselves board, lodging and other means of support. This London movement has determined the professors at Cambridge to remove the institution at Hitchin to a location within two miles of that seat of

NOTE.—In introducing the following paper the writer stated that several considerations had prompted its preparation. A careful study of the progress of collegiate instruction in Europe and America, during the last twenty-five years, had led to the conviction that female education was to receive greater attention than even that now given to our best Colleges. Again, after performing a personal duty to all his sons, now men, at Columbia College, D. C., he had been called to the same responsibility as to his daughters, yet young, at Rutgers Female College, New York city. Yet more, his careful observation as an instructor had revealed the fact that, while the aspiration of female college pupils for high attainments is even more controlling than in young men, scarcely one is to be met who does not rejoice at the wisdom which led the New York State Legislature to restrict Rutgers College from conferring “professional degrees.”

learning, so that it can be under their immediate supervision. Turning to Russia, we observe that, only a few years after the emancipation of the serfs, not only elementary schools, but also fully organized Colleges for female education began to be provided. Returning thence westward to Germany and France, the careful observer notes that some of the ablest writers are urging the establishment of collegiate instruction for young women; and are arguing its necessity from the advancement which the common people are making in the control they exert over political affairs.

It is needless to dwell on the fact now so palpable that, in our country, there is a demand not simply on the part of young women, but also of their parents, for a thorough collegiate education as the "right" to which females are unquestionably entitled. The questions incidentally associated with this demand, especially the suggestion that women should receive the right of franchise, add to, if they do not in one sense originate this demand; since the question whether this demand is legitimate must be determined by educated women themselves, in order to be safely and legitimately settled. This association of two ideas is an intimation of two principles, whose relation should be carefully considered.

In the first place, it is a recognition of the fallacy so current, and yet never controlling, that an elementary education is all that is required for the fulfillment of life's mission, both by men and women. Surely this suggestion overlooks the fact, so palpable to every one who thinks the subject through, that the mission of society as a whole requires the higher education which furnishes men of science, art and letters; without whom none of the industrial enterprises of a community could be kept up, and without whom, too, any State would soon be in anarchy. Equally apparent is it that, unless a people are to put themselves in the power of an educated class separate from their families and community and strangers to their sympathies, they must provide this higher education for their own sons. This fact becomes so palpable to thinking men that colleges for young men abound; and parents have sufficient ambition to secure it for their sons. The new and persistent call for female colleges recognizes another principle. The culture of women, and that alone, secures and makes available the culture of men. Search where we will, analyze the social influences that rule in a Turkish or English community, open history at any page, and we find the truth as permanent as human nature, that all efforts to secure true culture among men have succeeded only so far as female culture has prevailed. The

rise of an Aspasia, the inspirer of Socrates, as he himself avowed, is not an exception in human history; it is the rule. All studious observers know that men, associated with women of high position in European society, have been made in childhood or manhood what they are by the moulding power of cultured women. The sojourner in the mansions of families who for generations maintain their ascendancy anywhere in Europe, has learned that the daughters receive as thorough an education as the sons, who graduate from the university. While the idea of higher education is restricted to a class, this will ever remain true. But when the sons and daughters of the people generally claim their title to sit among the princes, when a Russian emperor seeks to have an emancipated people prove worthy of freedom, when in America any young woman may be called to sustain the reputation of a husband occupying official station, parents will aspire to give a higher education to their daughters, and statesmen will appreciate their persistent demand. The neglect which has led to the endowments of hundreds of colleges for young men in our country, while scarcely one man has thought practically of the manifest truth just stated, is one of those wondrous oversights from which men often suddenly awake, wondering that they should have been so long blinded.

The demand for collegiate education we may then regard a legitimate one; and colleges for young women will certainly be furnished by Americans, when Japanese sagacity is discerning their necessity. The question then next arises whether any modification in the curriculum is requisite in such colleges. These two palpable facts meet the comprehensive observer: the peculiar cast of woman's intellect as compared with man's, and her sphere of intellectual influence as separate from his, demand an education parallel to, yet the counterpart of the established college curriculum.

Recent discussion in England as to increased facilities for female culture have led able writers to search the annals of the past, in order to trace the distinction always recognized between the intellectual cast of woman and that of man. From the days of our first mother, the more earnest spirit of inquiry and the quick intuitions have been characteristic of woman's mind as contrasted with man's. Napoleon said, after he had learned to speak frankly, "that in his divorce from Josephine he lost his best counselor; that her instincts were truer than his reasonings; and that her first-glance impressions of men and measures were both more clear and more impartial than those of his cabinet." That man of large success in business is an exception who

has not found his wife's intuitions the happy supplement, the perfect complement of his less impartial estimates and of his more tardy calculations. Yet, again, strength is the general characteristic of intellect in man and grace in woman. The cimeter of the light-horse Saladin cuts hairs in argument when the claymore of Cœur-de-Leon does not break a casque. The ox-like drag of man's heavy-moving mental machinery is outrun by the careering sally and dash that sparkle in woman's debate. No one fails to admit that from the day when our first father yielded to his companion aspiring to be wise, woman has in all history carried her point in differences with man. Assuredly, then, this positive power, so controlling, should be guided by thorough culture.

This leads naturally to the consideration of woman's sphere, as it is now discussed. That sphere, fixed by nature, never has been, and, from the necessity of the case, never can be materially changed. The family is and ever must be the foundation of all human society. If the family be regarded as an association for industrial provision, we are met by the fact that every successful business copartnership has its indoor and outdoor head. If the family be viewed as the school for the wider relation of political association, we know that government must have its appointed official representative. If yet, again, the family be considered in its higher aspect as the divinely established agency for the perpetuation and moulding of a race prepared to accomplish his special purposes, then there can be no question which one of the partners is called to the indoor and which to the outdoor duties of home and country; which to the rough exposure and which to quiet moulding. It is wonderful, now, to remark how comprehensive thinkers have brought harmony into discussions as to woman's sphere, which have at times created an unnatural aspiring, sure to meet disappointment. When Plato, by his Republic, had inaugurated at Athens the same partial philosophy now rife as to female suffrage and official precedence, Aristotle called attention to the *facts* which always have decided and always will decide. The Greeks had always, unlike the Asiatics, maintained monogamy; because there were about the same number of each sex born into the world, and because the Greeks thought every man as an equal, entitled to one companion. The relation of husband and wife he regarded as always subject to voluntary choice; and the position of each in the family that of joint office; woman, because of man's constant public occupation away from his home, being the virtual head of the family, while man's rule was only occasional at home but constant in society at large. As to

political relations, the same profound thinker distinguished between civic right which entitles every individual to protection by law, and political right which gives to the portion of the community fitted for its exercise a voice in making and maintaining government. The latter demands three qualifications: the capacity to decide by practical intercourse with men what should be law; the habit of association with men which gives discriminating judgment as to acts in violation of law; and the physical ability to bear arms in the forcible execution of law. Woman's sphere in the family manifestly unfits her for all these three offices: the legislative, judicial and executive functions of government. All history indicates that woman, by her moral influence, may privately control the counsels of men in their associations for public ends; and that same history equally shows that it is women who are women indeed, filling their positions as heads of families, who most instinctively condemn the few unsexed advocates of female suffrage, who, from personal ambition, misrepresent their sex. All discussions as to the modifications of collegiate education for young women must proceed on the supposition that her sphere of influence is the old established realm fixed by her nature, that of family and social control, which has always most ruled the action of parliaments and of courts, of armies and of nations.

Directing now our attention to our main topic—the ends and means of higher education employed in past and in present times—we find a striking likeness in the practice of civilized nations. Education, as the word implies, is the drawing out, rather than the storing of the mind. It is like the training of the mechanic, of the artist and of the engineer, which develops, directs and energizes natural power. The mind's powers, which require practical drawing out, are those of thought and of expression; the one that truth may be attained, the other that it may be successfully imparted. The fundamental studies employed as means for this development have been in all historic ages, in ancient Egypt and India, in Greece and Rome, and they are now in modern Asiatic and European colleges, these two as primary: mathematics and the classic languages. In mathematical reasoning, the most youthful pupil *knows* whether the process is correct or not; and he can point directly to any error and to its result. The merest child that, by its own effort, seeks the sentiment of another's mind through a foreign language, and is daily called in translation to express that thought readily in his own tongue, is employing a means of culturing both thought and expression for which human wisdom has never been able to devise a substitute. The discussions in Eng



land during Arnold's day, in Russia within the past year, and of our American educators during recent changes in collegiate instruction, have confirmed the philosophic conclusion that the study of the cultured classic tongues, from which all the languages of Europe have derived their terms of science, of art and of philosophy, are absolutely essential in three respects to true mental development: first, as the structural foundation of all modern cultured tongues; second, as the storehouse of scientific nomenclature; third, and mainly, as a developer of the power of thought and of expression, which can receive no substitute. Young women must either remain wanting in the very elements of mental development, or these first lessons in intellectual gymnasia, the mathematics and the classic tongues, must be fundamental in female colleges.

In all ages, however, the mere gymnasium or provision for simple development of the mind's powers has been made but the preparation for university studies, which are to store the mind; and these have been pursued with more or less of completeness in our colleges as time and facilities have allowed. These may, perhaps, in higher departments of collegiate education, be grouped under these seven schools: mechanics and natural philosophy, embracing applications of the mathematics; natural history, including plant, animal and human anatomy and physiology, with geology; language and literature, embracing all those studies designed to give practical skill in the use of foreign tongues; rhetoric and logic, which afford power in the use of one's native language; æsthetics and criticism, embracing practical as well as theoretical acquaintance with the fine arts; civil history, political science, and economics; and moral and intellectual philosophy. In each of these departments of collegiate study, not only the demands of general culture, but the practical demands of her sphere, require that a young woman become proficient.

Young men devoted to any pursuit, industrial or intellectual, are trained in mechanics, astronomy and natural philosophy as an essential part of general culture. To young women, the principles of mechanical laws will be directly practical in the varied oversight of the household, which are always either directly or indirectly woman's care. Very few young men are called to any practical application of their knowledge of anatomy, physiology and hygiene; but every physician, knowing that sickness and its cure are to be met in all households, and are always woman's responsible charge, feels that his prescriptions will be sure of efficiency only where an intelligent nurse presides. A man of collegiate training, engrossed in profes-

sional pursuits, feels no hesitation in avowing at home and abroad that he has no time to keep up with the current literature of the day, or to acquire facility in the use of a foreign language; but his companion, educated or not in the school, would be mortified to make a similar avowal. Young men, who design to devote themselves to business rather than professional life, are urged in college to train themselves to proficiency in logic, rhetoric and elocution, since not only in public but in private circles this acquisition is absolutely essential to meet with ease and grace the tax of cultured association; and in this the women of our day are and must be leaders. For, in all history, theory might anticipate, and experience confirms as the fact, that a literary atmosphere never pervades society, unless women of culture compel the conversation of the social circle where men and women meet, into a common channel, as they cannot in conversation as to the business pursuits that occupy them; and even here elocutionary training is found indispensable to facility, grace and attractiveness in literary conversation. In the fine arts, especially in music and drawing, practically if not theoretically, it is the exception when the educated man is proficient; but with young women the exception in such attainment is always marked as a defect in natural gifts or in early training. In the practical application of the lessons of history, in the philosophy that underlies especially politics and economics, woman is more practically interested than man; for if man gathers wealth she controls its expenditure; if business-men seek fragments of time for consideration of the means which keep up the physical and moral health of the body-politic, woman is expected to share most largely in correcting the evils which unwise legislation and violations of law entail. Yet, again, who knows not that it is the wife, the sister, whose intellectual and moral influence is expected to give law to men trained even in the college; and how is this possible unless man's knowledge in these departments be woman's also? In each department of collegiate instruction, if women be considered merely as the companions of men, woman's need is if anything greater than man's; and the college should be as much for the one as for the other.

But how enhanced this demand when we consider that woman's culture is to give shape to succeeding generations. While the wife and sister by their culture give character to the social circle and thus to the real spirit of a nation and an age, it is pre-eminently the mother's culture, not the father's, that gives the first spring, the early shape, the mature moulding to the intellectual and moral cast



of the age next succeeding, and thus to generations still to arise. The impressive fact that while under European institutions, religious, political and educational, families are built up which for generations maintain an elevated position and a superior culture, scarcely a single American family has survived the decline of the second generation, is beginning to awaken the attention of men who seek for themselves, their family and their country something more than an ephemeral fame. Children of our great and princely men drag down to oblivion the worthiest name, because the generation that next wears it shows a lack of fidelity most vital in the educational training of heirs who should prove worthy of their parents. Where are our princely families in the land, whose princes in wealth and wisdom of the first generation, nevertheless, so greatly abound? Which of our noble statesmen, generals, merchants has left descendants that gave increased luster to his name? So rare is the exception to the fact that the very children trained in the household of the noblest specimens of American manhood disgrace the parents who should have made them worthy—so rare is the exception, that the causes of this anomaly begin to awaken earnest inquiry. It is worthy an hour's thought; but to one, mainly, of these two causes it must be referred: either the father has too much to do to gain and to maintain his own high position, and therefore neglects the training of his children, or the mother lacks that practical wisdom which thorough collegiate training affords. This latter, as history attests, is the main error. The mere material, superficial, artificial show of her family absorbs the thought and labor of its head; which, if directed by the counsels and control of an educated mind, would make her children derive from their increased facilities an advance on their parents and their generation at large that would secure perpetuated families of growing power in every department of life.

This double demand, then, for higher female education, the controlling influence it will certainly have on the existing age and its forming and growing power over the next, calls back our thought to the leading point of our proposed consideration: *The Modifications of the established Curriculum requisite and legitimate in Female Colleges*. Our previous survey of the cast of woman's mind as the complement of man's, of her sphere as the supplement of his, and of the direct tendency of the college curriculum to develop and direct the mental energies of a young woman as well as of a young man, while at the same time they are more generally practical in woman's

than in man's lifelong vocation, restricts this final survey to a narrow limit.

Every one of the seven departments of university, as distinct from gymnasia studies, is as important in female as in male education. Within the last few years the increasing importance of special training for lucrative industrial pursuits has called for modifications of the curriculum to meet the wants of our young men destined to different professions. A careful discrimination, directed to the special vocation of woman as distinct from man's, fixed as this her vocation is by her peculiar cast of mind, may suggest modifications perhaps even more legitimate than those made for different classes of young men.

To woman, grace, rather than strength, is the natural divine gift; she is to rule by gentle yet effectual persuasion, rather than by stern close-linked and hard-pressed conviction; and her domain is more purely æsthetic and moral than it is logical and intellectual. This calls for another glance at the several departments of collegiate study, to see in what schools woman's culture must be more extended and in what it may be less labored, than in colleges for young men.

Commencing with the classic languages, it is manifest that young women must make greater attainments in modern languages than young men; especially in French as the language of common intercourse, in German as the language of literary research, and in the Italian as the language of art. This demands a more restricted study of the classic tongues. Here our attention is called to the fact that in former times special selections were made from classic authors, as Cæsar, Virgil and Cicero, required for entrance into college; while now whole books of these authors are to be passed in review. Practical teachers now find, that, for a few weeks, a new author will be carefully studied until his peculiar style is mastered; when the rest of the entire volume is carelessly run through, either from the attraction of the narrative, or as a drudgery that must be undergone. Much of the time thus devoted to classic authors, many thoughtful teachers cannot but regard a waste; while some will come to the forced conclusion that, by cultivating habits of careless study, this undigested storing is worse than useless for all purposes of genuine culture. The female college may certainly take the position that the thorough mastery of the general structure of the Latin and Greek tongues attained in the grammar of these languages, a practical power to employ their etymology and syntax by the drilling of prose composition, and a familiarity with the vocabulary and idioms of the

best historical, poetical and philosophical writers attained in choice selections from a few works, as a modification of the curriculum of classic study, may give time for added lessons in modern languages, while attended with no real loss of true culture in the classic tongues.

Turning, again, to the second department of gymnasial studies, the mathematics, these two facts are to be observed. The end of this study is twofold ; to train the mind to detect errors in the process of thought, and to give an understanding of the principles of mechanism framed by man and established by the Maker of all in the material universe. These ends are indispensable in female mental development. But the practical teacher has learned that full one-half of the labored demonstrations of propositions in geometry, two-thirds of the problems in algebra, and like proportions of the treatises on trigonometry, algebraic geometry, and calculus are repetitions both in principle and detail ; and that they occasion, as do repetitions in classic readings, either a listless or a careless habit of study ; securing, indeed, facility from review to practical mathematicians, but giving no new employment to the mental powers, and furnishing no new principle for future use in terrestrial and celestial mechanics. The same reduction may here be made in the mathematical as in the classical curriculum ; and this may afford the time requisite for æsthetic and art-studies, specially demanded in female as distinct from male collegiate education. The naturalness and hence the legitimacy of these suggestions will appear on a moment's reflection. As the study of the ancient languages is directly subsidiary to that of the modern languages, whose words, if not their idioms, are so largely derived from the former, so the study of the mathematics, as the ancient Greeks had learned, have a bearing on the fine arts quite as important as on the mechanic arts.

It is needless to dwell on the minor modifications that the good sense and observation of every educator will suggest as appropriate for female culture in the other departments of college study. As already intimated, the amount of time given to modern languages in female colleges must be greater than in colleges for young men. It follows necessarily from this fact, also, that a different method of instruction must be pursued, since the end to be attained is practical facility in speaking at least French and German ; which cannot be secured without direct use of these languages in certain parts of collegiate instruction, or by the employment of them in certain hours devoted to college pursuits. It will be naturally suggested, too, that instruction in elocution has a different end and must take a different character

from that given to it in young men's training. It is not, however, for that reason to be neglected; since the elocutionary training of the college is deemed essential even for those who do not intend to be public speakers; who need, however, to acquire confidence, ease and grace in communicating their thoughts in private and social circles. As this is pre-eminently woman's sphere of intellectual and moral influence, while none of the special styles of elocution, as the dramatic for the stage, the oratorical for the platform, or the didactic for the desk are demanded, that other general style properly called the conversational, which can take on, upon occasion and for the moment, either of the features of the three special styles, that which gives special vivacity and effectiveness to every popular speaker in public or private,—this is to be a part of an educated young woman's training.

In closing this cursory survey, it must be apparent that the special form which is to be given to female colleges, now becoming a reality in the State of New York, demands the attention of our very ablest men devoted to the subject of the education; not simply of those who are giving their energies directly to it. It is certain that colleges specially devoted to female education must be furnished for young women. If trustees are brought to think it proper that existing colleges be opened for young women, those who most long for such education will not overcome that delicacy of sensibility which forbids their entrance. Yet more, if admitted, and if accepting the proffer, the curriculum specially prepared for young men will prove quite unadapted to the intellectual development of true women.

## ETHICAL ASPECTS OF SCIENCE.

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The intense energy which has characterized the prosecution of research in every department of science, during the last fifty years, has borne legitimate fruit in the numberless theories advanced touching the genesis of man and of the world. Organic chemistry and the microscope have opened up the arcana of the physical world, and revealed marvels beside which the wildest dreams of the Persian magi were mere commonplace credibilities. Physiology has made such strides that, in its latest phase, it may be regarded as a new science, while all the kindred branches, which a lack of suitable instruments of research had previously cramped, having overleaped their boundaries, are now running their race with incredible swiftness. The ferment of industry profoundly agitates every science. *Opere omnis semita fervet.* That man, with his irresistible tendency to theorize, should turn those new floods of light on the problems of his own destiny and that of the world he inhabits, is not to be wondered at; but it is a wonder, and a matter of regret likewise, that in too many instances he has wrested the grand truths of science to his own degradation and sadly perverted their significance. He has done this by inventing theories at variance with those principles of morality which have governed the world for ages, and on the integrity of which the welfare, nay even the existence of society depends. To assert that legitimate science is to be held answerable for the excesses of her votaries, would be as false as presumptuous; and while I may have occasion to find fault even with men who have won for themselves undying fame by their discoveries, I am convinced that I do greater honor to their names while endeavoring to remove those spots which dim the luster of their greatness. Theories adverse to morality spring from the tone and direction of modern scientific research, or, to formulate it more precisely, from the misapplication of the scientific mode of investigation to the sciences themselves and its application to subjects to which it is not adapted. If scientific men started with the postulates that there is an essential difference

between right and wrong, that conscience is the immediate discerner of the difference, and that this perception is intimately connected with a system of rewards and punishments, they would hesitate to draw conclusions in conflict with those postulates, even when apparently justified by the premises. But deeming all admissions not resting upon a scientific basis as calculated to restrain inquiry, they strive, by the elimination of all *a priori* truths, to make the mind a *tabula rasa*, and to build up a system of knowledge which must invariably respond to the test of experience. I had the honor, two years ago, to call the attention of this learned assemblage to this tendency of the scientific mind in its dealings with physiology, and noted the case of an eminent teacher of medicine in France, who asserted that the admission of any principle of action in man, which could not be brought to the test of chemical and physico-chemical modes of investigation, should not be allowed in advance, as calculated to narrow the field of physiological inquiry. But it is not in physiology alone that this repudiative tendency exists, since it is still more openly displayed in those studies which have for their aim the co-ordination of all the sciences. Comte, Spencer and Mill may be taken as the leading exponents of this effort at co-ordination, and the relations their labors bear to the universally accepted principles of ethics may be regarded as partially illustrating my theme. John Stuart Mill accepts the positive philosophy of Comte, in so far as he accepts the principle of evolution and transition of the sciences, from the theological to the metaphysical state and from the metaphysical to the positive; while Herbert Spencer adheres to the same principle, with trifling variations. Now, if we admit this principle in its entirety—and those gentlemen need not be reminded that in order to be logical they must do so—we bring under it not alone the so-called exact sciences, nor purely intellectual truths, but all objects of knowledge of every description, thereby striking a fatal blow at those principles of order and morality upon which human society was originally founded and upon which it virtually rests to-day. The theological relation of the mind to knowledge was founded, they say, in the belief that a direct intervention of personal volition governs all phenomena in the moral as in the physical world. But as the constancy of those phenomena became apparent and experience taught the variability of volition, virtues and entities were imagined to reside in those invariable antecedents of phenomena, sometimes denominated causes. If this first step in the stage of the theory of evolution be admitted, what becomes of those truths which are so



intimately connected with their grounds of admission, that the latter being called in question, the truths themselves must cease to exist, at least for us, subjectively? The phenomena of the physical world remain truths for us always, no matter to what agency we attribute their production; but the moment we question the source of our moral sentiments, whether we doubt them to be the product of fear and prejudice, or, as D'Israeli says in *Lothair*, "if we question that thought is phosphorus, soul complex nerves, and our moral sense a secretion of sugar, from that moment those sentiments become imperative, and every check to human passion is removed." Now, admitting the principle that all human knowledge reposed, in the first instance, on what those philosophers call a theological basis, and for the purpose we must include all moral and religious beliefs, the moment that basis is found insecure does not the whole superstructure topple? The phenomena of the outer world, having nothing to do with our moral conduct, stand in the same relation to us as before; but men must have ceased to believe that there is an essential difference between right and wrong, that obedience to lawful rulers is a virtue; in a word, during the period of transition to the metaphysical state, the moral world must have been all agog. Happily, history presents no such fearful picture to the view, and so far the transition theory and history do not harmonize.

Pursuing the revolutionary doctrine, we find the next transition to be from the metaphysical to the positive stage. And here is wrought a new subversion of our motives of certainty. Supposing that mankind had recovered from the bewildering discovery that all it had hitherto believed was the baseless fabric of a vision, and that it must set about reconstructing science on a new foundation; no sooner is the new structure complete than it must be again pulled down, and this time the fair edifice reared by Plato, Aristotle and the schoolmen of the middle ages must succumb to the free spirit of transition, or, as the philosophers of the new school would say, the metaphysical stage of human knowledge must give way to the positive. To-day we are in throes of this transition, and doubt must triumph till the high priests of the religion of humanity have completed their work. This revolution is in reality going on in the scientific world, and positivism is the legitimate offspring of modern science. Science says that, in the prosecution of its ends, nothing can be admitted but what experience demonstrates. Practically, it confines the effects of this dictum to its own domain; but positivism, with a more logical grasp of the principle involved, applies it to all things knowable, and hence

the new science of sociology. Society and morals must be reconstructed, new relations between capital and labor must be established, a different basis for the distribution of property be employed; in a word, the face of the earth must be renewed. Does not every one perceive that the direct consequences of this doctrine would be the overthrow of those principles which have hitherto guided man in his efforts to consolidate the interests of society? Not only must Christianity, which mainly represents what is, by the positivist school styled the metaphysical stage of human thought, be cast aside as having ended its mission in the process of scientific evolution; but even the moral doctrines, which natural theology inculcates, must cease to influence men's conduct, having lost weight by the removal of the ground-work on which they had hitherto rested. If positivism has been of slow growth in the natural sciences, how much slower must be the progress of the complex process of positive reconstruction in society and politics? In the mean time, having rejected the moral code which belonged to the theological and metaphysical periods of thought, how are men to govern their lives, to what standard or rule of action must they conform their conduct? If conscience and the hitherto regarded immutable principles of action upon which conscience proceeds are robbed of their coercive force, who or what influence can stay the hand of the secret assassin or the torch of the midnight incendiary, or who knows at what moment mob law may reign supreme in the land, light up the skies with the lurid glare of burning cities? Penal laws have long since proved inadequate to the prevention of such enormities, when the public conscience has been profoundly disturbed. It is surely, then, a subject of congratulation that these views are not of wider prevalence. And yet the rapid popularization of science and scientific theories through the medium of an ever-growing press, and their presentment rendered each day more attractive by the artifices of rhetoric, cannot but rapidly impress the minds of the masses. We are all aware that the reconstruction of society in accordance with the principles of the new school of sociology was attempted in Paris not long ago, and the results are not unknown. Were I to speak of the later speculations of Comte, which Mill and Comte's most ardent disciple hitherto repudiate, I should give offense to cultivated minds. And yet, notwithstanding the absurdities which characterized those later views of Comte, they are more logical than the conservatism which makes Mill and Spencer halt midway, for they are the natural consequences of the classification of the sciences admitted by them all. If we here



pause to consider the immediate cause which led science to favor this plunge into the seas of universal uncertainty, we shall find it intimately connected with a gross misapprehension of the word *right*. With strange inconsistency, Comte himself pointed out this mistake. Scientific research necessarily presupposes as a condition of success entire exemption from restraint, the greatest freedom of investigation. But this freedom is an evidence of progress only when not exercised inconsistently with pre-established truth, and as each series of scientific truths becomes unfolded, the limits of this freedom must be proportionately narrowed. We have a legal right, indeed, to pursue our inquiries to the verge of folly, but not a moral right to do so. In this sense, there can be no such thing as a right of freedom of conscience or to free thought; for the moment a fact, of whatsoever sort, is established on an incontrovertible basis, from that moment no one has a right to call it in question. The mistake consisted, therefore, in confounding an exemption from legal restraint in our investigations in religion, morals and science, which all claim as an inalienable prerogative, with the logical right to call in question recognized and long-established truths. If our savans had but kept this distinction in sight, they would not have blundered into the absurd formula that all men have a right to think for themselves, for surely a mere exemption from legal restraint does not constitute a right.

Were I to enumerate the many theories based upon the data of modern science, all looking to the solution of cosmic and human genesis, and all equally amenable to the charge of subverting the universally accepted ethical doctrines, I should pass the limits of the prescribed time. But the very fanciful manner in which Saigey in France conducted his system to conclusions of rank materialism, cannot but prove interesting and significant. This gentleman, starting with the assumption that unity is the basis upon which the universe was planned, imagines motion to have been the first cause, inasmuch as he assigns no ulterior cause for motion itself, and refers all phenomena to this agent. Everything is motion transformed—light, heat and electricity. Inert matter there is none. Spiritual substance there is none. These admissions would prove fatal to the fundamental idea of unity. Thus, for the sake of an idea, this savan confounds mind with matter, forcibly conforms his theory to his idea, and views the facts and phenomena of nature in a most grotesque light, in order that they may be made adaptable to his theory. The idea of unity is undoubtedly sublime, but not such a unity as distorts truth. The older

philosophers had a grander idea of unity than this when they admitted one God in whom all things are contained as one, in what they termed an eminent manner, that is, a manner ineffably superior to what human tongue can express or human mind conceive; just as, in the political world, the unity implied in a universal submission to one God is immeasurably grander than the idea of mere geographical unity, which so often involves injustice to those on whom it is made to operate. And when a principle so grand in itself is thus misunderstood and misapplied, there is no limit to the errors which may result. Thus, the moment Emile Saigey formulized his theory into the dictum, "atoms and motion form the universe, with motion as prime cause," from that moment he began to relapse into the ridiculous notions of Epicurus Leucippus and Democritus. In order to explain the admirable order of the universe, he had to admit an inherent virtue in those atoms, by which, being once set in motion, they selected such relative situations as gave rise to this harmonious arrangement.

But to hasten to a conclusion. The radical error underlying those false speculations is one of method. The scientific method is that of induction or analysis; it proceeds from the particular to the general, and can employ synthesis only when the enumeration of similar facts is complete. Any attempt at synthesis, before a perfect enumeration of any set of similar phenomena is made, leaves the door open to possible error, and so long erroneous speculations will be rife. Strict logic demands this condition for the valid application of the synthetical method. It is not meant, however, that this enumeration should be metaphysically complete; for, as in the deduction of the law of universal gravitation, Newton could not have observed all instances to which the law applied, but a reasonable analogy, relatively to him invariable, constant and universal, justified his conclusion. If scientific men were but to refrain from synthesis till a similar analogy came to their aid, the cause of true science would be greatly served; for the energies which are now expended in pernicious speculation would be directed towards discovery, and would help to increase the store of facts till their number would admit of their being enumerated under a general law, and thus justify the use of the synthetic method in their regard. But not only should the true method of investigation proper to the sciences be faithfully exercised, but the youth of our colleges should be taught that there is another mode of investigation, eminently logical, and suited to problems of the social and moral order. The exact sciences rightly

admit no *â priori* truths of their own order, for they deal entirely with experience; but no one can undertake the rectification of our social or moral system without the *â priori* knowledge of God, the first cause of all things. If we call the knowledge intuitive, the mode of inquiry is simplified, but herein, at all events, lies the essential difference between the methods of investigating physical nature and dealing with the social and moral problems of life. The former method, rightly pursued, leads to a clearer conception of the power and goodness of the Deity; the latter method must have its starting point in the idea of the Godhead. For this reason, the Aristotelian or syllogistic mode of proceeding admirably answers the purposes of this second method, since the syllogism, in every instance, proceeds from the better known to the less known, and knowing God we know all things in him, but as "through a glass darkly," whereas the inductive method takes facts as it finds them and thereon builds general laws.

Since it would be presumptuous in me to hope that ideas so much more eloquently presented by very many others should carry with them much weight in this crude shape, I will state that I have merely desired, through a sense of duty, to lift my feeble voice, in behalf of what appears to me the truth, before a learned and appreciative gathering.

## STATE AID TO ACADEMIC INSTITUTIONS.

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REPORT OF THE COMMITTEE APPOINTED BY THE UNIVERSITY CONVOCATION ON  
THE INCREASE OF THE LITERATURE FUND.

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At the last annual meeting of this Convocation the following resolution was adopted :

*Resolved*, That a committee of ten be appointed to secure, by legislative action, the increase of the literature fund, the proceeds of which are distributed to the academies of the State.

Under this resolution, the Chancellor appointed the following individuals as the committee :

J. Allen, Principal of Alfred University, Academic Department.

J. E. King, Principal of Fort Edward Collegiate Institute.

Albert Wells, Principal of Peekskill Academy.

J. S. Gardner, Principal of Whitestown Seminary.

G. B. Manley, Principal of Cortland Academy.

A. B. Watkins, Principal of Hungerford Collegiate Institute.

N. T. Clarke, Principal of Canandaigua Academy.

S. D. Barr, Principal of Penn Yan Academy.

J. Jones, Principal of Geneseo Academy.

G. W. Briggs, Principal of Delaware Literary Institute.

This committee held a meeting at Syracuse, on the 5th of December, 1871, and after full consideration of the subject the following resolution was adopted :

*Resolved*, That simple justice requires that the annual distribution to our academic institutions be increased by the State to \$200,000.

To secure this end, the following petition to the Legislature was adopted and sent to the trustees and principals of academies and academical departments of union schools :

*To the Legislature of the State of New York :*

The undersigned, inhabitants of ———, in the county of ———, and trustees of ———, respectfully represent :

That in the year 1838, in an act passed "to appropriate the income of the United States deposit fund to the purposes of education," etc., it was provided that, from the income of the said fund, \$28,000 should be annually paid over to the literature fund, to be distributed, together with \$12,000 from this fund, among the academies of the State. By

the same act, appropriations were made to the common school fund ; thus providing, at the same time and from the same source, for the academies and common schools.

The number and condition of the academies at that time, and at the present, are indicated as follows :

	1838.	1870.
Number of academies.....	103	200
Scholars in attendance.....	10,111	30,313
Invested in lots and buildings.....	\$772,270	\$3,435,556
Tuition received.....	102,155	387,283

Notwithstanding this large increase in the number of academies, the attendance and the sums invested by voluntary private contributions, and the payment of tuition, the literature fund has not been increased since that time.

It has always been the policy of the State to encourage such contributions for educational purposes. Now, that these have largely increased, the same policy requires increased encouragement.

The work which these institutions do, gives them a fair claim to an increase of appropriations. The academies and academical departments of union schools furnish higher education to large numbers from the rural districts, which their common schools cannot, in the nature of things, provide. A large portion of the teachers of the district schools are educated in them. The normal schools receive \$18,000 per annum each, while no academy receives over \$200 for educating teachers.

These institutions cannot be maintained in a condition of efficiency, without additional public aid. This, your memorialists believe they deserve, and that every consideration of public policy demands a more liberal provision for their support. They, therefore, respectfully and earnestly ask your honorable body to give the subject due consideration, and to appropriate such an additional sum as your wisdom may dictate.

A sub-committee of five, consisting of Messrs. Allen, King, Barr, Jones and Watkins, was appointed to personally present the subject to the Legislature. This committee, through a portion of its members, assisted by the Secretaries of the Regents, appeared before the educational committees of the Legislature and laid before them the claims of academic institutions. The attention of various other members of the Legislature was called to the subject. A clause was introduced into the appropriation bill and passed, as follows :

“For the benefit of academies and academical departments of the union schools, the sum of one hundred and twenty-five thousand dollars, or so much thereof as may be derived from a tax of one-sixteenth of one mill upon each dollar of the taxable property of the State; the sum thus arising to be divided as the literature fund is now divided, which is hereby ordered to be levied for each and every year.”

The following supplemental act was introduced and passed the senate, and was ordered to a third reading in the assembly, which it did not receive before the final adjournment :

AN ACT in relation to academies and union schools, and the distribution of public funds.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows :*

SECTION 1. The Regents of the University are hereby authorized and directed to distribute the sum total of the several appropriations to academies and union schools provided by law to be made, in the manner following, that is to say :

1. Such sum, not exceeding six thousand dollars, as may be applied to the purchase of books and apparatus in the manner and on the conditions now prescribed by law.

2. For the instruction of teachers of common schools, in a course to be prescribed by the Regents of the University, in such academies and union schools as the said Regents shall designate, a sum not exceeding forty-thousand dollars in any one year, at the rate of fifteen dollars for each scholar so instructed during a term of thirteen weeks, and at the same rate for not less than ten weeks nor more than twenty weeks ; but no institution shall receive more than five hundred dollars on account of instruction so given during any one school year.

3. All scholars in any academy, union school or common school who shall hereafter pass the preliminary academic examination instituted by the said Regents, shall be entitled to receive instruction in the classics or higher branches of English education, or both, in any academy or union school subject to the visitation of the Regents, for a period not exceeding twenty-six weeks ; and institutions giving such instruction shall be entitled to receive twenty dollars for said twenty-six weeks' instruction, and at that rate for a less time.

§ 2. The balance of the sum total of the appropriations referred to in the first clause of the first section of this act, remaining after the appropriations provided for in the subsequent clauses of the same section, shall be distributed *pro rata*, as the income of the literature fund is now distributed pursuant to law.

§ 3. The total value of the property of every academy hereafter incorporated by the Regents of the University in lot, buildings, library and apparatus, shall be at least six thousand dollars.

§ 4. The treasurer shall pay annually, on the warrant of the Comptroller, the several sums to which the Regents of the University shall certify that each institution is entitled under the provisions of this act.

§ 5. The Regents of the University are hereby authorized to make such just and equitable rules and regulations as they may deem necessary for the purposes of this act.

§ 6. This act shall take effect immediately.

The object of this supplemental act was to bring the academies and common schools into more intimate and helpful relations, and to begin the application of the free school system to the higher institutions.

Permit us to present some considerations why the measure thus inaugurated should be perfected and perpetuated.

### I. ITS JUSTICE.

The committee predicated its appeal to the Legislature, primarily, upon the simple justice of the measure. This was enforced by the following considerations:

1. What the State is doing for its common schools. In 1869-70 it paid by tax, exclusive of New York and Brooklyn, at the rate of five dollars and ninety-five cents per pupil, and for the whole State, six dollars and thirty-three cents. The total expenditure, exclusive of repairs, was at the rate of fourteen dollars and sixty-nine cents per pupil. The general tax pays forty per cent of this, while local tax pays the remainder.

2. What the State is doing for its normal schools. To six normal schools it paid in 1869-70 the sum of \$122,728.59 toward the education of 1,054 candidates for the profession of teaching, being at the rate of \$122.12 per scholar; or, if we add the academic students, 332, it amounted to ninety-two dollars and eighty-eight cents for each normal and academic student; or, if we include as pupils children of all ages and grades, it gives an average to each pupil of forty-one dollars and ninety-five cents as State aid, only thirty-four per cent of those aided being normal pupils proper.

3. What the State has been doing for its academic institutions. In 1838, it paid the sum of \$40,000 toward the education of 10,111 scholars, equal to three dollars and ninety-six cents per scholar. In 1870, it paid the same sum of \$40,000 toward the education of 30,313 scholars, being at the rate of one dollar and thirty-two cents per scholar. The average ratio for ten years previous was one dollar and thirteen cents. If we add the \$14,636 paid academies in 1870 for the education of common school teachers, it amounts to one dollar and fifty-four cents per scholar, as against forty-one dollars and ninety-five cents which the State pays the normal schools for teaching, on an average, a much lower grade of pupils, and against five dollars and ninety-five cents which it costs the State for each pupil instructed in the common schools, or, including all expenses, against fourteen dollars and sixty-nine cents which it costs the people for each child so instructed. It costs the academies, including all outlays, on an



average, fifty-four dollars and eight cents yearly for each scholar instructed. Of this amount the State pays only a little more than three per cent. For every teacher instructed by the academies there is a loss of twenty-four dollars, the State paying thus fifty-five per cent of the cost and compelling the academies to give the remainder.

4. If the State paid the same per scholar for those taught in the academic institutions as it does for those in the common schools, it would make an annual distribution of \$180,372.35 among these institutions. If it be objected that the State does not pay for higher education, then if it should pay for those in the academic institutions who could not pass what is termed the Regents' examination, to the number of 22,336, in 1870, the same as is paid per pupil for those in the common schools, it would distribute annually \$141,386.88; or, if it should pay the same as it did for all grades in the normal schools, it would annually distribute \$936,995.20. The academies instructed, in the above named year, 1,494 common school teachers for one term, at the rate of ten dollars each per term, equivalent to 484 such teachers for the year at thirty dollars each. If the State had met the actual cost of such instruction, it would have paid \$26,779.72; or, if at the same rate that it paid for instruction of teachers in the normal schools, it would be \$58,000.

If the increased appropriation made by the last Legislature shall be distributed as contemplated, it will give, on an average, for the scholars in attendance for the ten years from 1860 to 1870, five dollars and forty-four cents, which is one dollar and twenty-eight cents less than what the State paid by tax for the pupils in the common schools for 1869-70. For the expense of average attendance the State will pay, under the new law, exclusive of the appropriation for the instruction of common school teachers, only fifteen per cent of the actual cost of instruction.

## II. ITS WISDOM.

That this aid is wise as well as just is claimed from the following considerations:

1. *Its Economy.*—From the data above given it is abundantly shown that the State receives more ample returns for the money expended on its academic institutions than from any other source.

The 30,000 youth in yearly attendance upon these institutions, and that pass through them out into the work of life or up to higher institutions, constitute the very flower of our youthful army. Their average attendance upon these institutions is about two years, so that some 15,000 pass to and from them yearly, fully 13,000 of whom



receive no further school culture, but go directly to their professional preparation, business pursuits and the labors of life. Our common schools look to them for the greater share of their teachers, and must continue to do so. In the language of one of the superintendents of public instruction: "If the required information to fit a person for teaching can be obtained in the academies, *sound policy and good economy* are in favor of relying on them for the training of teachers." It costs the State thirty dollars a year to secure the training of a teacher in an academic teachers' class, \$122.12 for each one trained in the six normal schools, and at the rate of forty-one dollars for those trained in teachers' institutes.

Again, in the cities where free academies exist, only a little over three per cent of those of school age are found in such institutions. In New York city it is less than one per cent, in the free college proper it being only one-seventeenth of one per cent, while throughout the State, exclusive of New York and Brooklyn, the attendance of such persons upon the academies, though not generally free, is nearly six per cent.

2. It encourages the voluntary method, individual enterprise and munificence. It is very desirable to cultivate in each individual citizen all the public spirit possible. These 200 academies, with their 1,200 teachers and 3,500,000 of vested property, are largely the results of individual or associated enterprise and munificence, and the comparatively small aid rendered by the State hitherto has been one of its chief inspirations. The increased aid secured by the recent legislation will, if perpetuated, greatly increase these voluntary endowments. Every dollar thus secured relieves taxation and does the State just as much good as if raised by tax, while every youth educated in such institutions is educated just as much for citizenship and the public good as if educated by means of taxation.

3. These academies meet a demand which cannot soon be met in any other way. The academic institutions, variously denominated free academies, high schools and academical departments of union schools, constituting a part of the public free school system of the State, can, and doubtless will, be established in all of the cities and larger villages. These have already absorbed a number of the academies proper, changing them into the academical departments of union or free schools, furnishing free tuition to resident pupils, but charging tuition for non-resident pupils. Let this work go on to its full extent, neither striving to retard nor accelerate it by arbitrary control. Only let common sense have her perfect work, and whenever her dictates

demand it, whenever the citizens find that this form will meet their wants better than the academy proper, the change will take place ; only let not legislation be discriminating, and the law of natural selection will settle all. Yet, when this has been done and the system of free schools perfected, there will still remain a large residual want unprovided for in the great rural districts. The old-form academy must long stand for the high school of these districts. The very nature of the case precludes the successful application of the village and city system to the needs of the country at large. The freer and more varied courses of study of the academies are better adapted to the pupils of more advanced age from the country than the more primary and strict course of the academic departments of union schools, these being adapted to a much younger class of pupils. The appliances likewise possessed by the former over the latter for taking entire charge of the pupil will, hereafter as now, induce those seeking a school away from home to patronize the academy proper, rather than the academical departments of union schools. From a recent report of the Regents it seems that academical departments throughout the State average only about ten non-resident pupils, while the great body of the students in the academies proper are of this class, thus showing the general and continued favor in which they are held by the rural population, as well as by not a few from the villages and cities. It is very evident that these institutions must and will continue to exist and thrive in spite of all opposition, and that, instead of their influence being deleterious, it will be most salutary and invigorating upon all our educational interests. Assuming thus the continued existence of these institutions founded by private munificence, all the best interests of education demand that the State should supplement this munificence by such aid as shall enable them to become the most efficient possible, furnishing to the youth of the State the very best educational facilities as nearly free as possible. All true culture should be fostered and helped by the State. Thus operating, there is no essential antagonism between them and the free schools proper, and there should be no hostility, but, rightly considered, they are mutual aids, and both should be treated as co-workers in the great cause of education.

### III. ACADEMIC CULTURE—RELIGIOUS, NOT SECTARIAN.

1. The crowning objection to giving State aid to these schools is that they are sectarian. While now and then one may come under this ban, the charge is without force in respect to the great body of

them. These objectors do not clearly discriminate between religious and sectarian culture. Many of our academies were founded and are sustained by local enterprise or public spirit, no more sectarian or even religious than was that which founded or located our normal or any other of our public schools, while most of those institutions which were founded through religious, even denominational enthusiasm, have been devoted sacredly to an unsectarian culture. In them, students from all denominations and no denomination meet upon a perfect equality, finding equal privileges and opportunities. Doubtless these institutions, as a whole, are as free from the taint of sectarian tenets in their training as are the normal and other schools. Is not a school officer or teacher coming to his position through denominational impulses quite as likely to work for the public good as one coming through the machinations of party politics? Is the sectarianism of our religionists to be any more dreaded in our school officers than the Philistinism of our politicians? A public officer, though coming into power through political partyism, if he uses his official position not for party ends but solely for the public good, is accounted a faithful political servant, worthy of honor. So an institution of learning, coming into existence through religious, even sectarian inspirations, yet using this existence not for sectarian ends but for the public weal, should be accounted a public good and worthy of generous support. This is an open field wherein all denominations can enter and work for the public good. On this common and broad platform all should be accepted, none rejected.

2. While thus perfectly unsectarian in their culture, yet it is true that they are, to some good degree, though all too imperfectly, striving to permeate their culture with the religious element. This, we claim, instead of being a defect or wrong to be punished, is their crowning glory, for which they are to be upheld and cherished. Just here the battle is gathering. The time is fast coming, indeed, the adumbration of its darkness is already upon us, when the abnormal growth of our rank Philistinism in politics, if permitted to have free course, will drive all religious instruction from our schools. The Bible is to be a forbidden book. All text-books must be expurgated of all Biblical taint, emasculated of all religious inspiration and power. The voice of prayer and praise must be hushed. It further demands that all religious expression be driven from Legislature and court, army and navy, reformatory and charitable institutions. Politics is striving, as with a dirty sponge, to wipe out all religious sentiment from its domain. All must be completely secularized to meet its behests.

The time is hastening, if these bad influences go on unchecked, when God is to be unknown in all of our governments, both national and State, and in all of their institutions. Public and governmental atheism will be the watchword, and "irreligious liberty" will rule supreme. Obligation to God or religious obligation to humanity must be unrecognized. That word of inspiration which breathed into the nostrils of this republic the breath of life and connected it consciously with God, viz.: "All men are created equal and endowed by their *Creator* with certain inalienable rights," must, under this new dispensation, be transmuted into a scientific vernacular suited to the high reign of reason, as follows, viz.: "All men are developed by the laws of differentiation, from the homogenous to the heterogenous, and arranged according to the principles of stable equilibrium, and endowed by the correlation of forces with certain perduring powers," etc. The time will then have fully come when not only the Bible, prayer and praise will have disappeared from the schools and the republic, but it will likewise have become illegal to teach the existence of God, the immortality of the soul, or the religious sanction of morality.

The republic will then have become a godless republic, and all of its institutions godless institutions. Then there will be seen written along the walls of our once glorious school system, with an unearthly hand, words which it will take no prophetic power to translate; and the nation, in that same hour, will have become a second Nebuchadnezzar, ready to be turned out to graze with the cattle until such times as reason shall have returned and God be again acknowledged as the God of nations and their institutions, as well as of individuals.

Our republican institutions are the outgrowth of unsectarian, but very positive religious ideas and convictions. Our common schools, as well as our academies and colleges in common with all that is best in our modern civilization, are the fruitage of Christianity. The pure white light of religion is decomposed into its primary colors in the various institutions of this civilization. They are the downward and outward working of its divine forces. Our schools are the elder children of American puritanism, and they cannot ignore their parentage without being compelled, as prodigals, to feed on the husks left by the swine of political atheism. They cannot ignore the Bible and religion without becoming atheistic and anti-Christian in their culture. There cannot be simple neutrality. The whole tendency of such attempted neutrality is to inoculate with the virus, not of a simple bias to doubt, but with that of the most virulent skepticism and

rank infidelity. As the body is animated by the soul, so should learning be vivified by religion. All true culture points Godward. All mental activities need to live and move and have their being in the religious, to bask in it as the world does in the sunlight. God has joined religion and learning in most intimate and sacred bands, and man never has, and never can, put asunder what God has joined, without injuring both. What the eye is to the body, what the ear is to the tongue, such is learning to religion. On the other hand, knowledge, without religious control, is a Samson grinding as readily at the mills of the Philistines as at those of Israel.

In this oncoming struggle, our academies and collegiate institutions will be the chief conservators of religious culture. Instead of being maligned and crushed, they should be protected and strengthened, both by individual munificence and State aid.

In conclusion we would, therefore, recommend the adoption by the Convocation of the following resolution:

*Resolved*, That this Convocation appoint a committee of fifteen to secure, with the co-operation of the Regents, the perpetuity of the legislation already obtained, and to perfect and secure the passage of the supplementary law in such a form as shall unite the academic institutions and the common schools of the State in more intimate and mutually helpful relations, to the end of promoting thereby a more thorough training in the common English, as well as the higher branches of education.

J. ALLEN,

*Chairman of Committee.*

**AGRICULTURAL EDUCATION.**

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BY JOHN STANTON GOULD,

Professor of Mechanics applied to Agriculture, in Cornell University.

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Americans most fully believe that they are a practical people; they feel that they are complimented when this attribute is ascribed to them, and mortified when it is denied to them.

In some respects they deserve the title. In general, they prepare their sons and daughters for the special calling that they are designed to follow, by a careful preliminary training in their principles and practices.

Blacksmiths, carpenters, masons, goldsmiths and tailors serve apprenticeships to those trades before they can practice them. Musicians are taught the principles of acoustics, the theory of vocalization, and the practice of the scales, before they can teach music or practice it in public. No one thinks of practicing law, physic or divinity without long and careful training in the proper schools.

No board of railroad directors would expend a single dollar on a track that had been located by a sugar maker or constructed by a veterinary surgeon, or by any other than an educated and well-trained engineer.

If any one should attempt to practice either of these trades or professions without this thorough preliminary training, practical men would predict a disastrous issue to the undertaking.

Although in these, and many other respects, Americans vindicate their claim to be a practical race, there are other things in which their conduct is as unwise and unpractical as can well be imagined. They strangely enough imagine that a man can be a successful farmer without any special education whatever, although he is confronted in every step of his progress with the most recondite processes of nature, which require for their elucidation an encyclopedia of all the sciences.

The chief advocates of this strange doctrine are the farmers themselves. If it were possible to summon all the farmers of the United States before this Convocation and to question them severally with respect to their views of agricultural education, a very few would



answer, in all the fervor of a deep conviction, that a thorough education was indispensable for a successful farmer, and that his success would be exactly proportional to the extent of his acquisitions.

A large number (but as compared with the mass a very small class) will tell you that special education is indeed desirable for a farmer, but you will see at once that there is no heartiness in their averments.

They have an idea that this is the proper thing to say, that education is, on the whole, rather ornamental, but down in their hearts they do not really believe that any amount of education would enable a man to raise a greater amount of grass, grain or roots from an acre of land than he would raise if he was entirely uneducated, or that he would reap any greater profit from his farm.

But the overwhelming majority of the assembled mass would ridicule the idea of educating farmers for their work. They would not hesitate to tell you that agricultural education was "a humbug" of the silliest kind, and that all that the young farmer needs is a little practical experience; book knowledge would only make him lazy and conceited.

Since farmers do not demand any education for their sons to fit them specially for the agricultural calling, it is not surprising that teachers have made no attempts to supply a kind of instruction which their patrons do not require, and which would in fact be offensive to them.

The utter apathy that exists in the public mind with respect to the prosperity of agriculture and to the education which must be the foundation of it, is one of the most curious psychological problems ever presented for solution. It is not only amazing but disastrous; it weighs like a millstone on all human progress, and all human civilization, and its removal will do more to elevate and ennoble the race than anything that can be mentioned.

Let us look a little at the facts and see if these things are not true.

We all, indeed, acknowledge, when we are questioned on the subject, that agriculture is of the utmost importance to the whole human race, but we acknowledge it because we are accustomed to do so, because everybody else says the same thing, and because we read it in approved books; it does not exist in our minds as a living, fruit-bearing proposition; it never leads us to take any action to correspond with it.

The importance of an intelligent agriculture appears:

I. Because the great struggle of our race is to provide food, drink and clothing. The necessity for this provision dominates over our

whole lives, and, to a very great extent, regulates all our conduct. When George III desired to bestow some acceptable mark of favor on a laborer on his farm at Windsor, to whom he was much attached, he asked him what he could do for him. "Well," said the man, "if your majesty will only give me as much as I need to eat, drink and wear for the rest of my life, I shall have all I want, and be very thankful for it." "Indeed you may be," said the monarch; "although I am King of Great Britain, this is all I get myself."

Now these are the very commodities that it is the business of agriculture to furnish to mankind. The farmer alone produces meat, breadstuffs, milk and sugar for food; cotton, wool, flax, hemp, silk, etc., for clothing.

If the labor of the farmers were intermitted for a single year, the whole human race would perish. This fact alone establishes the primacy of agriculture beyond a question. You cannot say the same thing of any other calling whatsoever. All other callings might suspend their labors for one year or for ten years, and though the intermission might cause much inconvenience, the framework of society would not be destroyed.

II. All experience shows that population invariably presses upon the supply of food. If you can double the supply of food in ten or twenty years, you will double the population in ten or twenty years. If you diminish the supply one-half, or one-fourth, the population will be reduced in a corresponding ratio. The population of the world is reckoned at 1,000,000,000, and they eat all the food that is raised upon the planet; nothing is wasted, nothing is left over. I remember when the population of the United States was 9,000,000 of souls and we raised just enough to support them. We raise more than four times as much food and of the raw material of textile fabrics as we did then, and our population is now 38,000,000. In other words, the population has exactly kept pace with the supply of food. If the supply of food had been reduced, the population instead of increasing would have diminished in a corresponding ratio. Thus agriculture is invested with the awful power of creation and destruction. No other trade or calling has the power of increasing the world's population.

III. There is an intimate, though generally unnoticed, relation between the cheapness of food and the morality of a nation; or perhaps the proposition will be more striking if we say, the scarcity and dearness of food is a cause of immorality. This assertion is thus proved. If we take the average price of food for each year of a century, and place it in the first column of a table prepared for the purpose,



opposite to that year ; if we then place the number of marriages in the next column, the number of illegitimate births in the next, and the number of crimes in the next, each opposite to the year of their occurrence, we shall find that in the years when food is the cheapest, the greatest number of marriages occur, there are fewest illegitimate births, and the fewest crimes are committed. On the contrary, when food is dearest, there are the fewest marriages, the greatest number of illegitimate births, and crimes increase both in number and malignancy. All experience shows that a cheap and abundant supply of food is conducive to higher civilization, manifested in a greater refinement of manners, a more elevated and comprehensive system of education and a higher social enjoyment.

It was the abundance of corn produced by the overflow of the Nile which nourished the arts and sciences of ancient Egypt, that made her the mother and the mistress of early civilization. The wondrous intelligence and social supremacy of Athens had its root in the fertile soil of Attica, and in the intelligent skill of the tillers of that soil.

On the other hand, barbarism is always the result of a precarious food supply. The wandering Indian and the stupid Hottentot never can be elevated into civilization until his food becomes abundant. When the plains of Babylon were artificially irrigated, they supported a teeming population that was educated, happy and prosperous ; when that system of irrigation was abandoned, the population grew sparse and lapsed into barbarism, and that once fertile and prosperous region is now the habitation of wild beasts.

IV. The importance of agriculture is illustrated by the enormous bulk of its productions and their aggregate commercial value.

Our production of potatoes, hay, corn, wheat, rye, oats and barley, in the year 1869, was 67,348,000 tons. Their aggregate value was \$1,411,333,000.

I have not included the weight or the value of the meat, the wool, the sugar, the honey, the cotton, flax, hemp or silk ; the milk, cheese, butter, eggs and hides ; the fruits, market truck or tobacco raised upon our farms. If the value of these and similar articles of production are taken into the account, we shall have a total annual value exceeding \$2,500,000,000, which very considerably exceeds the amount of our national debt.

In view of the facts stated under these four heads, have we a legitimate claim to the character of a practical people while we utterly ignore the claims of this great foundation interest for special educational facilities ?

Ought not the nation, as such and in its collective capacity, to watch with eager interest over the success of a calling that lies at the very root of civilization, of commercial prosperity; nay, at the very existence of society?

We can show most conclusively that there is a real necessity for this national care and oversight, because the soil is not at the present moment yielding more than half or even a quarter of what it is capable of producing, and that the present cultivated area might support double or quadruple its present population in a vastly higher degree of prosperity than it now does.

These are the facts: The average production of hay per acre in the United States was, in the year 1869, 1.23 tons per acre. This was also the average production for the State for New York. This was a year, it must be observed, in which the production, owing to very favorable climatic conditions, was nearly twenty per cent better than ordinary.

Every one knows that this average production is far below the production of our best and most intelligent farmers, who rarely cut less than two or three tons to the acre.

The annual value of the hay crop of the United States is \$400,000,000. If, therefore, we could make two blades of grass grow where only one grew before, we should add \$400,000,000 to our annual revenue. Such an addition would benefit every individual in the country. It would pay our national debt in five years. Now, our best farmers not only raise two, but three blades of grass where the average farmer raises only one. But the produce of our best farmers is far below the maximum capacity of the soil. Five tons have often been cut from an acre in this country, and from a celebrated meadow in Edinburgh, twenty tons have been taken annually in seven successive cuttings. If we could teach our farmers to bring their averages up to this point, we should, to borrow Dr. Johnson's phrase, find that our meadows possess "potentialities of wealth far beyond the dreams of avarice."

This great discrepancy between the actual and the possible production is quite as apparent in other crops as it is in the grass crop. The value of our corn crop, for the year 1869, was \$601,839,030. The average production per acre was 28 3-10 bushels per acre. This is less than one-third of what our best farmers are accustomed to raise on an acre. One hundred bushels is no uncommon crop. The State Agricultural Society in Indiana, in 1860, gave a premium on a crop of 263 bushels to the acre. If our average crop could be increased (as

it might be) threefold, it would add \$1,200,000,000 to our national income.

The same thing is true of our wheat crop. The average yield throughout the United States is twelve bushels to the acre. But many of our best farmers raise forty bushels. Thomas Powell, of Niagara county, N. Y., took a premium from the New York State Agricultural Society for a crop of seventy bushels to the acre, and 162 bushels to the acre have been raised in England.

I could in the same way prove the same discrepancy between the actual and the potential production of all other crops, but the examples already given will suffice. It is enough for my present purpose to show that by raising the average production, through the whole country, of hay, corn and wheat alone up to the standard of production of our best farmers, we should increase our annual agricultural revenue more than \$2,400,000,000 per annum. As "practical men" we ought at least to make an effort to secure this brilliant prize.

What is the reason that the average farmer does not get more than one-third as much from an acre as the first-class farmer does? The answer may be given in a single word, and that word is, ignorance. The reason that they do not raise maximum crops is, that they do not know how to do it.

You cannot talk with the great majority of our farmers for half an hour without seeing that they are ignorant of the elementary principles of agriculture; that they know little or nothing of those matters which lie at the very base of successful and remunerative agriculture. I will give some examples of this.

There are about 6,000 species of grass known to botanists. From 125 to 150 species are indigenous in the State of New York. There is hardly a farm in the State where from ten to fifteen species do not grow. Yet farmers who have lived on these farms and mowed the meadows for fifty years, do not know the names of these different species; they cannot tell the plain marks by which they are severally distinguished.

You can hardly find fifty farmers in the State who can tell the difference between Meadow Fox-tail (*Alopecurus pratensis*) and Timothy (*Phleum pratense*). And yet there is nothing about grass that a farmer needs more to know.

The former is of great value as a pasture grass. It will furnish a good bite for cattle three or four weeks earlier in the spring than the latter will, and when gnawed off clean on one day will afford a good bite again the day but one after. The latter, though not valuable as

a pasture grass, is of pre-eminent value as a meadow grass. It will give twenty-three lbs. more of dry hay to 100 lbs. of grass than the former. It contains twice as much flesh-forming matter, three times as much of fat-forming, and two and a half times as much heat-making material. Yet farmers will sell both kinds at the same price, and will take no more pains to encourage the growth of one than the other. They suffer of course an enormous loss in consequence. If farmers are ignorant of such vital facts as these, it is certainly a pretty plain proof that better agricultural education is required.

They are as ignorant with respect to grain as they are about grass. There are about 150 varieties of wheat cultivated in this country. Some of them are adapted to sandy lands, some to heavy, some to light loams, and some to stiff clays; some to wet lands and some to moist lands. Some have stiff straw and some soft and weak straw, some make white and some dark flour, some abound in gluten and some in starch. A barrel of flour made from some kinds of wheat will make 250 lbs. of bread, while others will make 332 lbs. But these special adaptations are not accurately understood by any farmer, and are only approximately understood by a very few. The great mass of them sow such seeds as can be most easily procured, without even a thought of any special adaptation to their own soils, circumstances or wants.

I do not know how many different kinds of maize or Indian corn are raised in the United States, but I have seen nearly 100 different varieties. It is the same with corn as with wheat. Farmers do not know which of these varieties are most nutritive, or which are the most prolific under given circumstances. Nevertheless they vary greatly in both these respects. The analysis of Dr. Emmons shows that there is thirty-three per cent more of flesh-forming matter in the white flint corn than in the Ohio Dent, and similar differences may be found running through the entire list.

These specifications of the ignorance of farmers respecting the matters that it is most necessary they should know, might easily be extended, but I have already said enough to show the enormous losses that are entailed on them as individuals, and upon the whole community at large in consequence of their lamentable ignorance of the first rudiments of their profession.

The only institution organized in the State to meet a want which I have shown to be so vital, is the Agricultural College of Cornell University, which could easily accommodate 300 students, but which

actually has about twenty. There are 216,250 farms in the State, and therefore one student of agriculture to 10,812 farms.

This is a very sad showing, and very discouraging to the ardent friends of agriculture. There is no trade or profession practiced by men that involves the practical application of so many branches of science. The farmer cannot understand the origin and nature of the soil he cultivates without the aid of geology; he cannot understand the germination and growth of plants, or the proper application of manures, without a knowledge of both inorganic and organic chemistry. To identify weeds and useful plants, he must be familiar with practical and theoretical botany. Insects often ravage his crops; he must learn entomology in order to guard against their ravages. He breeds and rears domestic animals; he needs, therefore, a thorough knowledge of anatomy, physiology and hygiene, if he would reap the largest profits of which the business is susceptible. His processes are mostly dependent upon the weather, and he should therefore be acquainted with the principles of meteorology. In short, there is scarcely a single branch of science that will not be profitable to him in some stage of his operations.

We see the need of special agricultural education, but how shall we account for the entire apathy of the farmer with regard to it? Why do the farmer and his sons reject the aid that is offered to them?

There are, undoubtedly, many distinct answers to these questions, but I believe that the entire exclusion of agriculture from our common schools is one of the causes of the apathy complained of. In our primary schools there is not only elementary instruction given, but a higher knowledge is foreshadowed; curiosity is thus awakened, and desire to possess this knowledge is aroused. The graded school, while it supplies the want, also foreshadows a wider range of knowledge which is supplied at the academy, and the academy in its turn foreshadows and excites a taste for the higher knowledge taught in the university. It is this hierarchy of schools that excites the desire for knowledge, as well as affords the means of gratifying it. If there were no seminaries intermediate between the common school and the university, the number of students in the latter would be very small.

I see no other way to fill up the present agricultural college, and to promote the establishment of new ones in different parts of the State, but to resort to the same system. The sons of our farmers must be taught in the common schools that there is such a thing as agricultural science, which is of great practical utility, and some specimens of this science should be interwoven into the course of study.

This should be extended in the course of instruction at the academies, and in this way the sons of farmers would be led to seek for the complete course of agriculture provided in the agricultural college.

Some years ago, an admirable little manual of agricultural chemistry was prepared by the late Professor Johnston, of Edinburgh, and was reprinted in this country, which would form an admirable basis for the teaching of agricultural chemistry in our common schools. All the apparatus required for performing the experiments described in it can be purchased for twenty dollars. Two short lessons a week, illustrated in a lecture from the teacher, of about ten minutes in length, would take the pupil through it in a year. Of course it is very elementary, but the boy will get some real and fruitful ideas of the more important alkalies, earths, acids, and of their behavior in each other's presence; and what is still more important, he will get glimpses of problems beyond the book, which will excite his curiosity and make him anxious to acquire a fuller knowledge when he is transferred to the academy.

Half a day in summer could be profitably devoted by both teachers and scholars to gathering all the varieties of grass and grain that grow in the neighborhood. These should be illustrated from time to time in short ten-minute lectures, and the specimens preserved in cabinets kept in the school-house for that purpose.

Once in each summer month the teachers and scholars should make an excursion into the fields and woods, to collect the insects of the vicinity, which should be named and preserved in the school-house, and similarly illustrated by short occasional lectures. Collections of geology should be made and illustrated in the same manner.

Of course the scholars would get but a slight elementary knowledge of these matters from such instruction, but the initial step would be taken, the seed would be planted, and there are good reasons for believing that it would bear fruit an hundred fold.

The work thus commenced in the common school should be carried on still further in the academies. Their museums of agriculture should be much fuller, including all the plants of the county, specimens of all the timber trees and their seeds, of the rocks and fossils of the county, the various kinds of mineral manures in use, models of the more important agricultural implements, and wax models of the fruits, which the young ladies, ingenious in wax work, would be glad to supply if they knew that they would be valued and preserved.

A pretty full course of lectures on organic chemistry, botany and economic geology, and on entomology with reference to agriculture,

should be given annually, and the whole course of the teaching should be directed to the cultivation of habits of attention and observation.

If this course were adopted in our common schools and academies, the Agricultural College of Cornell University would not only soon be filled to overflowing, but other similar institutions would be imperatively required in every section of the State.

When the young farmer is thus prepared to enter upon his career, by a thorough knowledge of all the collateral sciences, there will soon follow a vast augmentation of our crops and revenues, the average production of our fields will rise to the level of maximum production, and all the sources of our civilization will be elevated in a corresponding ratio.



## SHOULD STUDY IN COLLEGE BE CONFINED TO A UNIFORM CURRICULUM, OR SHOULD IT BE MADE TO ANY EXTENT ELECTIVE?

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The question whether the instruction given in our colleges ought to be confined to an invariable curriculum of study and made uniform for all the undergraduate students, or whether, in regard to any part of it, or at any period in the progress of advancement, the choice of the student himself should be consulted as to the branches to be pursued and the extent to which they are to be followed, is one which has agitated the educational world for nearly or quite half a century, without being apparently any nearer a settlement to-day than it was when the controversy began. In some respects the conditions of the question have in the mean time undergone changes of material importance; and yet the discussion proceeds as if nothing of the kind had occurred. On the side of the conservatives, the curriculum of collegiate study continues to be spoken of as a monument of the wisdom of centuries, on which it would be little short of sacrilege to lay a profaning hand; while, in the view of the party of progress, even the highest wisdom of the ages of comparative ignorance is liable to appear no better than folly in the light of advancing knowledge. To listen to the debates, or to read the published papers bearing on the question at issue, one would hardly infer that the curriculum of the present day is anything more or less than the curriculum of sixty years ago; and yet, no conclusion could be more singularly mistaken than this. So large have been the changes introduced into the course of instruction of our colleges within the period spoken of, that the studies which, at the beginning of this period, constituted the strong meat of the intellectual repast set before the undergraduate student, now serve for little more than to give flavor to a refectio made up mainly of a very different description of food. This change, though quite disregarded in the discussion of which there is present question, has by no means passed unnoticed by the friends of that ancient learning of which the interests have been so seriously imper-



iled by it. In England, the change has gone on faster perhaps, or at least farther, than it has yet with us; so that at present, at Oxford, it is possible to obtain the degree of Bachelor of Arts without studying any Latin or Greek author, or any Latin or Greek history, after the first year of the course; while, moreover, the classical study of this first year itself is reduced to a minimum. Of the prospect of the future of classical learning in that country, Dr. Lightfoot, in his recent essay "On a Fresh Revision of the English New Testament," makes the following observation:

"I should be glad to think my apprehensions groundless; but there is at least some reason to forebode that Greek scholarship has reached its height in England, and that henceforth it may be expected to decline. The clamor of other branches of learning, more especially of scientific studies, for a recognized place in general education are growing louder and louder, and must make themselves heard; and if so, the almost exclusive dominion of the classical languages is past."

This passage is quoted by the learned Dr. Spencer, Professor of Greek in the College of the City of New York, in an able article on the value of classical study in a course of liberal education, contributed by him to the Church Journal of New York, with the added comment that "substantially the remark applies to our own country, and opens up a question of no little interest and importance, whether we are to foster, encourage and advance classical learning for its own sake, or abandon it as effete and of no further use in the days in which we live." Nor can we soon forget the weighty words to the same effect of that ripe scholar and experienced educator, Professor Tayler Lewis, pronounced in this place one year ago in one of the ablest communications ever laid before this body, in which he says that "the attacks on [the classics] and the yielding to the popular clamor by men who ought to have resisted it, have had a most deteriorating effect; and this is seen in the partial and inadequate treatment to which they have been necessarily reduced, both in the preparatory and the college course. In this way they are made to furnish an argument against themselves. See to how little they amount, it is triumphantly said. There is truth in the taunt; and we have therefore no hesitation in maintaining that, unless classical education is to be made more of, it had better be wholly banished from the college course." Professor Lewis spoke of the magnitude of the change which has taken place within his own time. He has himself taken classes "through the whole Republic of Plato, and other

important dialogues." Also, "through the whole of Herodotus, the whole of the Iliad, and, in some instances, the whole of both Homeric poems, together with an incursion into the Greek drama much beyond the usual recitation bounds;" and these things he contrasts with the present Greek programme of our colleges, "the very best of them," consisting of "a few books of Homer, a portion of Xenophon's *Anabasis* or *Memorabilia*, a book perhaps of Herodotus or Thucydides, an oration of Demosthenes, one drama or less from each of the great tragedians: these read piecemeal in disjointed daily portions, the literary interest all lost or overlooked, because the whole attention is absorbed or the time necessarily occupied in thumbing the grammar, while the lexicon is worn out in looking up new words, or old words over and again."

As corroborative of this representation may be given the experience of the present writer, in the college in which he was himself a student more than forty years ago, compared with the amount of classical reading prescribed in the programme of the same college at the present time. At the earlier period, there were read all of the two large volumes of Dalzell's *Collectanea Græca Majora*, embracing most of Xenophon's *Cyropedia*, *Anabasis* and *Memorabilia*, with large extracts from Herodotus, Thucydides, Lysias and Isocrates, Plato, Aristotle and Longinus, and the poets Sophocles and Euripides; besides several books of Homer's *Iliad*, and the oration of Demosthenes on the Crown. In Latin, at the same time, the reading embraced eight books of Livy's *History*, the entire volume of the poetical works of Horace, including odes, satires, epistles and the *Art of Poetry*; Cicero, *de Officiis*, *de Senectute*, *de Amicitia*, *de Oratore* and *de Republica*; and finally Tacitus, the *History*, *Agricola*, and *de Moribus Germanorum*. In the same college, at the present time, the classical reading appears to be in Greek, four books of the *Odyssey*, half the first book of Herodotus, four orations of Demosthenes, one book of Xenophon's *Memorabilia*, a tragedy of *Æschylus*, and one of Sophocles. In Latin, one hundred pages of Livy, three books of the *Odes*, and the *Satires* and *Epistles* of Horace, Cicero *de Senectute*, one term of the *Satires* of Juvenal, and one term of the *History* of Tacitus. In the Junior year, Latin is read through one term, and Greek through two (there being three in the year), and in the Senior year Latin is read for one term and Greek not at all. The change here indicated is very great—great enough to justify the proposition above quoted of Professor Lewis, that the classics had better be given up in our colleges, or else read more.

Now, it is impossible that a change of this extraordinary magnitude in the programme of collegiate instruction could take place, while the expediency of enforcing upon all undergraduate students a fixed curriculum of study is under discussion, without in some manner affecting the solution proper to be given to that question. Suppose that an undergraduate student desires to pursue classical reading to something like the extent formerly given to it, is he to be denied the privilege of doing this? Fifty years ago the question would have been presented in the inverse form (as it often is yet), and would have stood, suppose he desires a more extended course of scientific study, shall he not have it? To this question the conservative reply has been constantly, and very positively, no; but now that the tables are very liable to be turned, we may reasonably ask whether it is any longer proper that this reply should be persisted in.

Before venturing to answer the question thus proposed, it is necessary to call to mind the argument by which, when this controversy began, the value of the curriculum of collegiate study, as it then existed, used to be maintained; for this argument continues still to be employed without reference to the fact that the thing to which it relates has been so changed as to render it, to a great degree, inapplicable. This argument rests upon the fundamental assumption that the great object of collegiate education is to discipline and not to inform the mind. And from this point of view the special merit, as educational instrumentalities, of the languages of ancient Greece and Rome, consists not in the fact that they are languages of great and cultivated peoples, or that they embody a copious and elegant literature, but simply in the fact that they are eminently artificial and logical in structure, and that they present a larger number of curious and varied problems for the exercise of the mental powers than any other known languages, living or dead, or even than any other subjects, whether philological, or literary, or philosophical, or scientific, which could possibly be chosen for a similar use. This, then, is the recommendation of these languages for purposes strictly educational; and it is important to observe that it is a recommendation which would be equally in their favor if the literature behind them were absolutely worthless; or even if they had none at all, any more than the Choctaw or the Cherokee.

Besides the fundamental assumption above mentioned, it must be further assumed that true education is strictly impartial, aiming to draw out and bring into exercise equally every mental faculty of the student, with a view to produce that symmetrical development and

just balance of the powers which constitute what has been called "a rounded culture." By inference, therefore, the elementary training of all minds should be precisely the same; and hence an invariable curriculum, uniformly enforced, becomes a logical necessity. And inasmuch as the study of language is admitted to be adapted to bring into salutary activity the largest number of the mental faculties, it seems in this view to be advisable if not necessary, or at any rate it is claimed to be the dictate of experience, that language in general, and especially the tongues of ancient Greece and Rome, shall constitute the main element in the system of liberal education. To propose, therefore, to permit the student to select for himself the studies he will pursue, is, upon this theory of education, simply unreasonable and absurd. If, in the exercise of this freedom of option, he selects the prescribed course, his freedom is useless to him. If he selects another, it is prejudicial.

Such reasoning, however, derives all its force from the hypothesis that the curriculum of study prescribed is the best of all possible curricula. It loses it altogether the moment this best of all possible curricula ceases to be maintained in its original integrity. For supposing that, under the constraint of influences too powerful to be successfully resisted, however presumably pernicious, serious modifications come to be admitted into the course; it is immediately possible that the student, in the exercise of a permitted freedom of election, may correct this evil by returning, in his own case, to the course as it stood before. Under such circumstances, to deny to him this freedom is neither more nor less than to refuse to him the opportunity of availing himself of that species of intellectual culture which is at the same time asserted to be the best that he could possibly enjoy.

Resistance, then, to the elective system must, if still persisted in, be based upon a different ground from this. It will probably take the form of the assertion that the freedom sought will never, or not in one case in a thousand, be exercised in a reactionary direction; but will rather, in all probability, be used in such a manner as to exaggerate instead of reducing the evil which the course has already suffered through the modifications forced upon it. The language of the argument will probably be something like this: The curriculum has indeed been tampered with and vitiated till it is far from being at present what it was and what it ought to be—a perfect scheme of educational training; but it is a great deal better, after all, than any which a student is likely to make for himself, and, therefore, we will not trust him with the direction of his own education. The study

of language, it will be said, is laborious, and to many it is dry and dull. There are other studies with a kind of dazzle about them which is attractive, and which promise to occupy the time in a way that is rather amusing than toilsome. These, of course, will be chosen by the average learner, who is to be credited with no desire for his own substantial improvement, but whom it is our duty to coerce to his own good. The argument is therefore no longer in favor of "*the* curriculum," that is, the best possible curriculum; but in favor of "*a* curriculum," that is, *any* curriculum whatever, as against the system of election.

It is never difficult, of course, to prove anything, when we are permitted to state hypothetical propositions, and then immediately proceed to treat these assumptions as facts. The argument above given in outline as likely to be used, and which we very well know actually is used in the discussions which go on upon this subject, happens, unfortunately, to be flatly contradicted by all the experience which we have yet been able to secure on this important subject. It is contradicted by the experience of Columbia College in the experimental admission of the elective principle into the later portion of the course during the last few years. It is contradicted by the much larger experience of Harvard University for a much longer period.

When experience and theory are in conflict, there can be no doubt that there is error somewhere. Either the theory is wrong, or we are wrong in our mode of applying it. It is even possible that our practice may not be conformed to our theory when we suppose it to be so; and this I do not hesitate to assert to be the case in regard to our theory of liberal education. For while this theory justly demands the impartial culture of all the faculties of the mind, the practice denies to the faculties which are earliest awake any systematic culture at all. The practice, in fact, tends rather to repress than to encourage the development of these faculties; and, in this respect, it could hardly be made more prejudicial if it had been expressly devised with a view to this effect.

In the order of nature, it is the powers of observation, the perceptive faculties, which first manifest themselves in activity. And this is a beneficent provision, since it is only through the exercise of these that material is to be gathered for the employment of the higher powers. Except for the ideas which originate in impressions on the senses, there would be no mental growth at all. And but for the eagerness and interest with which every child observes without being stimulated or coerced to do so, this growth would be much slower

than it is. These truths are so elementary and so universally accepted that they hardly need to be explicitly stated. And yet, in the plan of our system of liberal education, they hardly seem to be recognized at all. If they are truths, they certainly demand that the subjects earliest presented to the mind should be those which deal with material things, with outward nature and the objects which make it up; with their similarities and their diversities, their phenomena and the laws by which these are governed. Yet nothing of this sort enters into the early training of those of our youth who are designed to enjoy the benefits of the highest educational culture for which our system has made provision. Language is made for them, even from the tenderest years, the almost exclusive subject of study; and this difficult subject is made still more difficult for them by the form in which it is presented. The order of nature is thus completely inverted. An attempt is made to force the reflective faculties of the mind into premature activity; an attempt to which they but feebly respond, or fail to respond at all; while the opportunity, through the spontaneous activity of the powers of observation, of acquiring a vast fund of valuable ideas to serve as material for their later and healthful exercise, is deliberately thrown away.

This error, however, belongs to a period of the educational course, which it is not within the design of the present paper to consider. It was noticed at some length in a communication, addressed some years since to this body by the present writer, on the subject of the studies proper to be pursued as preparatory to admission into college; and is here alluded to only in illustration of the fact that our educational theories and our educational practice are not by any means in invariable harmony.

But the college course itself furnishes similar illustrations in sufficient number. Every new subject of study which has been admitted into the course since the century began, has been admitted in acknowledged violation of the theory on which the course is assumed to have been originally founded. For though among the advocates of these innovations there are not wanting those who maintain that the new subjects are just as valuable as the old, considered as educational instrumentalities, still it will not be denied that it is to the value claimed for them as matters of positive knowledge, and not to their usefulness as instruments of mental discipline, that they owe the place which they have secured. Chemistry has been admitted, for instance, into the course, on the ground that it is important that every educated man should know something about the elementary



composition of the matter which surrounds him ; anatomy and physiology, because he ought to understand the structure of his own frame and the functions of its several organs ; and mineralogy, geology, botany, physics, etc., for similar utilitarian reasons. Moreover, more than half the argument in favor of the extended study of the ancient languages is founded in these later times upon the positive value of the literature which this study unlocks. This, in fact, is the principal theme of the able article of Professor Lewis, already referred to. In that article, the learned professor has drawn a strong contrast between two schools of classical students ; schools which may be called the critical and the literary ; those on the one hand who study mainly for the sake of the language, and those on the other who study for the sake of the substance. In illustration of his idea, he says " it may all be expressed by saying that, in our colleges, we study Homer as a means of learning Greek ; we do not learn Greek as a means of reading Homer with facility." In his view this practice is a great error, having for its result to prevent the student from " reaching that highest culture which comes from a sound familiarity with this rich old literature." But this highest culture, he distinctly admits, consists in the acquisition of knowledge, and not in the practice of mental gymnastics ; in storing the mind with treasures, and not in exercising its faculties merely for the sake of exercising them.

If it were worth while, other particulars might be enumerated in which the practice of our collegiate course of instruction violates its accepted theory. So great is the multiplicity of subjects at present taught, as to destroy altogether, especially in the later years, the character claimed for the course as a system of mental discipline. It is no matter how well adapted in its nature any exercise may be to develop into strength any faculty of the mind or any organ of the body, this consequence can only follow upon its long continued practice and persistent use. It is not by the occasional wielding of a heavy hammer that the muscle of the smith's arm is thickened ; it is by the practice of wielding it for days and weeks and months. It is not by an occasional glance cast across the ocean's expanse, that the eye of the sailor acquires its proverbial acuteness ; it is by earnestly scanning the horizon, throughout many weary watches, during the protracted voyages of half a lifetime. In like manner, if, from the prosecution of any given study, we are to be justified in looking for any subjective benefit to the student, it is an indispensable condition of this result that the study shall be persistently pursued. But we know very well that, in regard to most of the subjects of study

embraced in our curriculum, such persistency is by no means secured. It requires, indeed, but the use of a very little and very simple computation to prove that it is impossible that it should be: since when we take into consideration the amount of time at our disposal and the number of topics we profess to teach, it is easily shown that an equal distribution would give to each but about two or three weeks in all. A study pursued through a period of time so limited may, perhaps, add something of value to the amount of the student's knowledge; but it can be of very little advantage considered as a means of systematic mental discipline.

It is time, therefore, as it appears to me, that we should revise our theory of collegiate education, with a view to make it conform a little more nearly to our actual practice; or that we should modify our practice to make it harmonize more nearly with our theory. The most judicious course apparently would be to admit, to some extent, both species of change at the same time; and with this would necessarily follow, as I shall endeavor to show, the introduction into the system of instruction of the element of plasticity, permitting it to be varied in its character to accommodate the exigencies of different minds. The doctrine that all varieties of mind may be profitably subjected to the same educational regimen, is a doctrine which it is not safe to admit, unless we confine its application to the most elementary stages. And here, in order to make myself understood, I cannot do better than to repeat the language in which I have endeavored succinctly to express my views on this subject elsewhere, which is as follows:

“There is a period of early life during which, without any artificial or intentional culture at all, the powers of the body and those of the mind simultaneously and spontaneously unfold themselves. During this period, if certain muscles of the body or certain of its limbs be kept in incessant activity, and certain others in continual repose, the results will be an abnormal and possibly a monstrous growth. But if the child be suffered to grow up under ordinary conditions so as to reach adult years with tolerably symmetrical proportions, the subsequent effect of unequal activity of the different members of the body will no longer be an unnatural development, or a marked disturbance of the balance of the physical powers, but rather a greater skill or aptness in the use of those which are most employed. Nor even in regard to this, is use or practice or exercise, after a very early period of life, sufficient to produce results which, while the system is still plastic, are accomplished almost imperceptibly and with infinitely



less effort. There are arts, such as glass-blowing, which can never be mastered except by persons who have grown up to them from early childhood. And no fact is more familiar than the facility with which the pronunciation of foreign tongues is acquired by infantile lips; while it is a hopeless undertaking for an adult, no matter what amount of practice and perseverance he may expend upon the effort, perfectly to master the same accomplishment.

“Now precisely the same holds true in regard to mental development. As there is a period of infancy during which the child is incapable of supporting his own weight, so there is one in which he is scarcely conscious of his own existence. And as, with the physical growth, the organs of the body acquire strength, and come by degrees under the control of the will, so, correspondingly, in the natural and spontaneous growth of the mind the faculties unfold themselves and expand into vigor, in simple obedience to the principle of development divinely implanted in the soul in the moment of its birth. With the progress of years this growth goes on; and the mind, like the body, attains an adult stage, whether it be subjected to external influences controlling its habits—that is, to educational influences—or not. There comes a time, at last, beyond which educational influences are proverbially vain. But in the very earliest of all they are almost omnipotent. This is the period during which, in obedience to nature’s law, the faculties are growing; and at this time the educator may force them, with some degree of success, to grow into any mould which he may choose to throw around them. Yet when expansion has ceased, moulds will be placed for them in vain; the mind will retain the contour which nature and circumstances have given it; and from this point onward the business of education is no longer to form it, but to make the most of what it is. There is here room, doubtless, for the educator to do much; but his proper business is to give fair play to the faculties such as they are, and such as they must continue to be; rather than to repress the salient characteristics, and to waste both precious time and weary labor in the endeavor to bring out others which have lost, or which have never possessed, the power to respond to the solicitations of the cultivator.”

If these observations be just, then the true theory of education is not that theory which aims professedly to secure for all minds identically the same description of development, or to force every mind into absolutely the same mould; but that, on the other hand, which anticipates, as inevitable, differences which no external influences can ever compel effectually to disappear, and which adapts its culture to

these ineradicable and irrepressible differences. The system of training which such an educational theory would provide may be described as follows: During the earlier period of mental growth, when the native capacities, the original distinctive endowments, are unascertained, it will aim with equal faithfulness to draw out every faculty which belongs to the human intelligence. This effort will be impartially persisted in until it shall have become perfectly and palpably manifest that all do not equally respond to the culture bestowed upon them. For that this will in due time be the case, experience always proves, and reason might lead us to anticipate. There is no more just ground for believing that all men will be born with equal or similar powers of mind, than that they will be born with absolutely identical characteristics of body; and while the brain continues to be the organ of mind, and the brains of infants sensibly differ, we must expect that there will be born with them intellectual differences which no system of educational training can possibly eradicate. Therefore it is not the business of education to undertake to eradicate these differences; and when the system of elementary discipline has brought them fairly out, and demonstrated beyond any question what manner of man it is with which we have to deal, it is no less unwise to expend our principal subsequent labor upon his most unpromising faculties, in order to realize the idea of a "rounded culture," than it would be in an army to subject to the most thorough and persistent drill the feeblest and most cowardly soldiers, to the neglect of the strong and the brave.

The first business of education is, therefore, to find out what the individual is fit for; the next is to make the most of him in that for which he is fit. And according to this true theory of a subject which plausible speculation has done very much to obscure, a special system of training, adapted to the idiosyncracies of the individual, is just as distinctly indicated for the later years of a liberal educational culture, as a general one, equally enforced on all, is for the earlier. And it further follows that if, at this later period, the student is permitted to follow the bent which his preceding training has served to develop, his choice will fall upon those studies which are in harmony with his bent, without any reference to the question whether they are, in the common sense of the words, "easy" studies or "difficult." For these terms, "easy" and "difficult," as applied to matters which concern the understanding, admit of two quite different modes of definition. No mental pursuit is easy if it be distasteful, no matter how small may be the labor its prosecution demands; and no similar pursuit is

difficult if pleasing, even though to follow it may exact the severest and the most persistently sustained exercise of the faculties. And in corroboration of the truth of this proposition, it may here be stated that, in Columbia College, under the system which permits the members of the senior class to select for the most part the studies which they prefer to pursue, there is no lack of volunteers for a subject commonly reputed to be so difficult and so forbidding as the calculus, or so obscure as the metaphysics; nor is there, on the other hand, any observable predominance in the number of those who select a branch so fascinating as physics, or so practical as technology or chemistry. The distribution has been, in fact, approximately equal among all the studies presented for option; and what is perhaps more important, it has been very much such a distribution as the faculty themselves would have made, had they, instead of the students, exercised the option. And this result is one which we may always reasonably look for, when parallel courses of study are offered to the choice of students during the later years of the academic course, whatever might be true if the offer were made at the beginning. For the effect of the early years of training is to bring out the character of each individual mind, and to determine what are its native idiosyncrasies and what it is possible to make of it. And though the doctrine that all the faculties of all minds should be developed as far as possible by appropriate educational exercise and discipline is a true doctrine, yet the doctrine that all faculties of all minds are equally capable of development is a fallacy which no enlightened educator will think of maintaining. That every faculty should receive its fair amount of fostering attention is certainly just and right; but to expect that this fair amount, or that any amount, of individual culture, however laborious, will secure to every individual an equal power or chance of success in any given direction, as for instance in poetry or mathematical research, is as unreasonable as to expect that every sapling in a nursery may, by proper care, be made equally prolific of fruit. After all that has been said about the desirability and the importance of a symmetrical mental development, and of the duty of shaping the educational culture with a view to insure such a development, the simple fact is that all minds develop themselves more or less unsymmetrically, just as certainly as that different minerals crystallize into different geometrical figures; and that it is just as hopeless for the educationist to look for that ideal conformity and perfection of mental proportions among his pupils, which has been so much insisted on as the end at which edu-

cation should aim, as it would be for the chemist to attempt by his science to compel all his salts to crystallize into spheres.

A hundred years ago, or possibly so lately as the first ten or twenty years of this century, the argument in favor of a uniform course of instruction in our colleges had a better foundation in just educational principles than it has at present; for at that period there can be no doubt that boys were entered in the colleges at an age which would now be considered absurdly early, and at which they would now be generally refused. This assertion is none the less true because at the same time there were not a few who entered at ages which might properly be called absurdly advanced. The latter fact arose from the scarcity of good schools of secondary grade. But of the younger class, many entered at eleven or twelve years of age, and some as early as ten; and in systems of collegiate instruction, as of collegiate government, the necessity of accommodating methods to the exigencies of the students who are least advanced in age or in culture is unavoidable. To boys between the ages of eleven and fifteen, or twelve and sixteen, it may fairly be argued that the curriculum of study may best be made uniform, and be prescribed by the authorities without reference to the preferences of the learners; since these latter will still be in that state of mental immaturity in which it is yet to be ascertained what they are most fit for and what is most fit for them. But it is hardly conceivable that a plan of education most perfectly adapted to the circumstances of boys like these, can be equally suitable for young men four, five or six years older. It is nevertheless a fact that the average age of graduation in the colleges of New York and New England, at the present time, is as high as twenty-one years. From an examination made of the record of entrance matriculation at Columbia College for the past several years, it appears that the average age of admission to the freshman class has been something over rather than under seventeen years. And the results of some inquiry in other institutions lead to the conclusion that the general average, at least in the colleges of New England and probably in New York, is rather above than below this. Thus the very age which was, sixty or seventy years ago, a very usual age of graduation at college and of entrance upon professional studies, is now the ordinary age at which studies begin. Surely, if the mental characteristics of young men are ever to be discovered, and if it can ever become safe to intrust them with some participation in the direction of their own education, this period ought to arrive at least a year or two before they become citizens and voters.

In what has thus far been said, no question has been raised as to the correctness of the assumption, always expressly or implicitly made in this discussion, that the curriculum of collegiate study as it existed in the past century was not only the best which could possibly be devised with a view to the discipline of the mental faculties, but that it had been made so of design, and upon a careful study of the philosophic principles of education. The fact is, however, that this curriculum was entirely the creation of circumstances. Our earlier American colleges were founded on the model of those of the British universities; and here, as there, their avowed design at the time of their foundation was not merely the general design to raise up a class of learned men, but specifically to raise up a class of learned men for the Christian ministry. Hence the kind of education at which they consciously aimed was not the discipline of the mind, but simply the filling up of the mind with the lore of other times. Here, as there, accordingly, their teachings consisted largely in the classics, to which were added—as we read in the historical sketches of Harvard and Yale colleges, by Dr. Palfrey and Prof. Kingsley—Hebrew, Chaldaic, Syriac and dogmatic theology. Dialectics and a little geometry completed the course. The demand for a lay education occasioned the relegation of systematic theology to independent though associated institutions; and along with this went the oriental languages, except so far as they continue to be retained in an extremely limited list of optional studies in the colleges.

The assertion, therefore, that by proposing to depart from the principle of uniformity which has been so long permitted to govern the course of collegiate study, we are setting ourselves up in opposition to the wisdom of the educational fathers who prescribed to us this principle, is not by any means sustained by the facts of history. These venerable fathers had an object in view, and they took the most simple and obvious means to accomplish their object. They desired to make men learned in the learning of their time, and the course of study which they set before them embraced that learning, and, so far as the duration of the course would allow, embraced all of it. If we, with a vastly more extended array of subjects of knowledge before us, put the whole of them also into our course, and in view of the fact that no single individual can master the whole, propose to each learner that he shall devote himself to such as he is conscious that he can best master, we but do what we have the best reason to believe the fathers themselves would do were they in our place.

The great evil of the invariable curriculum of study in our colleges at the present time is that it makes it impossible, at least after the end of the second year of the course, to teach any subject whatever with satisfactory thoroughness. From an examination of the programme of instruction in Columbia College for the junior and senior years (I select my own college rather than another, that my remarks may not seem invidious), it appears that if every student were compelled to take every subject, and if to every subject should be given an equal proportion of the available time, no single subject, if pursued continuously, could occupy a longer period than about a month. How is it possible to expect results satisfactory either to instructor or to learner from such a state of things as this? There is no remedy for the evil but that of permitting the student to concentrate his attention upon those subjects which are most in harmony with his native bent, and to leave the others to those to whom they in turn may be more acceptable.

Notwithstanding the fact that the elective system in colleges is commonly opposed by those who argue against it for reasons professedly drawn from the philosophy of education, my conviction is that the actual reason preventing its general introduction is one which is unavowed, and is rather material than philosophical; one which is found in the fact that this system cannot be introduced into any college where the uniform curriculum has heretofore prevailed, without increasing, perhaps largely, the number of exercises which the officers are required to conduct. As a rule, therefore, the introduction of the elective system will impose the necessity of enlarging the academic staff; and as this is a thing which it is not convenient for all colleges, or perhaps even for most colleges to do, it happens that a question which is constantly discussed as one of abstract principle, is practically governed after all in its decision by considerations purely economical. It is simply not possible that the system should be introduced into all the colleges; but since it is inevitably going to be introduced into many, the probability is that out of this circumstance will grow, sooner or later, a classification of colleges into grades. Out of the higher grade, embracing the smaller number, will probably be developed the universities, if we are to have any such, which are to rival those of continental Europe. The lower will remain what they are, or will disappear.

That we are beginning to feel in this country the need of some institutions of this superior grade is a remark which it is hardly necessary to make. We profess to embrace, in the teaching of our



colleges, nearly every subject of human knowledge; but we are scarcely able to pursue any one at present beyond its elements. The majority of our students do not become so proficient in even the classical tongues as to be able to read with facility the works of classic authors which they have never read before; and yet these are subjects in which they are required to be tolerably proficient before they present themselves to the college for admission.

Two modes suggest themselves by which to meet the exigencies of the class of aspirants to knowledge, who desire some better helps than our system has yet provided. One of these is the erection of a new order of educational establishments, entirely as yet without precedent among us, in which the student shall be permitted to select his own course, and the instructors shall conduct him to the last limit of the known; institutions which are to start into existence at the legislative *fiat*, with all that completeness of organization and all that abundance of the treasures of learning which the universities of the old world have been able to secure and command through the mellow experience of centuries. Projects innumerable have been set on foot among us, looking to the accomplishment of schemes of this magnificent and costly description; but so long as the highest and most favorite and most justly popular educational institutions which we have already, continue to be painfully struggling against the difficulties which limited means entail, in spite of all the influences—political, denominational, sectional and personal—which can be combined in their favor, it is idle to expect that such projects can succeed, and it would be a manifest wrong if they could do so.

The other plan is the adoption, in our better endowed colleges, of the elective system of study, a system which permits the student who desires to pursue any given subject to a greater extent, and to attain a greater thoroughness in it than is at present practicable, to give himself up, at some period of the course, certainly while he has still some year or two, at least, before him, more uninterruptedly to this, and to relinquish other subjects in its favor. Supposing such a freedom allowed, the tone of the teaching in all the departments of the college will be necessarily raised. Along with this innovation will also naturally grow up a system of post graduate teaching and study, of which we have as yet in this country scarcely a trace, but which, with the latitude at the same time allowed to undergraduates, will assimilate the institution by degrees to those which on the continent of Europe are called universities. And this is the only way in which, if university teaching in a proper sense is ever to enter into our edu

cational system, our American universities are to grow up. We want no universities ready-made; and if we did, we cannot get them. Neither our Congress nor our State Legislatures, nor such few lovers of learning as we have among our men of wealth, are going to pour out the millions required for the accomplishment of schemes so visionary; and which, if accomplished, would only have the effect to distract these vast sums from the more desirable work of strengthening and building up institutions which have already behind them an honorable history of substantial service rendered to the country during a long series of years. What this country now needs is that her colleges should be encouraged by solid evidences of the people's favor—that their endowments should be greatly enlarged and made adequate to that larger usefulness which we may justly look to them to exercise in the future. What the colleges need is such improvements in their plan of operations as only such liberality on the part of the public can enable them to introduce; but which, when introduced, shall enable at least some of their number to supply that deficiency in our system of superior education which we all admit to exist, and in supplying which they shall give us at length a real American university.



UNIVERSITY NECROLOGY.

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## VICE-CHANCELLOR ERASTUS CORNING.

Mr. CORNING was born in Norwich, Connecticut, December 14, 1794. When thirteen years of age, he was taken under the care of his uncle, Benjamin Smith, a hardware merchant of Troy, in this State, with whom he served as a clerk, and whose fortune he afterward inherited. In 1814, he came to Albany as clerk in the hardware store of John Spencer & Co., where he became a partner. On the death of Mr. Spencer, in 1824, he began in his own name the business which afterward became very extensive and lucrative, under the style of Erastus Corning & Co. His first public position was that of alderman of the city of Albany, after which he was mayor for three years. He became an officer of various railroad, canal, bank and manufacturing companies, and was repeatedly elected to the State Senate and to the National House of Representatives. He was also a member of the Peace Congress of 1861, and of the New York State Constitutional Convention of 1867. He was elected a Regent of the University February 5, 1833, and on the death of the late Gulian C. Verplanck was appointed vice-chancellor and became the senior member of the board. His counsel was always valued by his associates, and his services were especially useful as a member of the standing committee on the State Cabinet of Natural History, in which he took a deep interest. His death occurred April 8, 1872, and was the occasion of extended newspaper notices of his life and character, from one of which the following extract is taken:

“Erastus Corning entered into rest after a long period of most patient suffering, on the eighth of April. He was buried from St. Peter’s church, in Albany, on the twelfth of April. The bishop of the diocese, the rector of the church, and the Rev. Mr. Shinn (in whose parish church many of the workmen of Mr. Corning’s iron works worship) were the officiating clergymen.

“The plain, purple colored coffin, of the old wedge shape, with the cross upon the cover, had on it neither ornament nor flower, only a wreath of autumn and evergreen leaves, and a little bunch of ripened wheat. There was no sermon and no display, and a great man, unob-

tentatious and simple in his living and in his giving, died and was buried as he had lived. All of the clergy of the church in the city, and some from Troy, the legislature, the courts, the city officials, and the leading men of Albany, personally and officially, were present. The stores were closed, the bells tolled, the streets lined with silent mourners, and two thousand sturdy workingmen, with a sober and subdued dignity that showed the reality of their feelings, escorted the long funeral train to the grave.

“The numerous resolutions of respect, and the spontaneous outpouring of the people at the burial, showed the place which Mr. Corning held in their affections and honor. They saw in him the man of foresight and courage, of instinctive judgment, of tenacious purpose and commanding dignity; accurate in every detail of duty, strict in integrity, prompt in decision; of iron will, and of unflinching perseverance. They knew too—hundreds of poor people witnessed it with their tears—of his gracious and unostentatious generosity, of his genial interest, of his silent benefactions, of his readiness to counsel and befriend the poor. No one knows thoroughly, but God, his simple, childlike, trustful faith; the calmness with which he bore suffering and made himself ready to die; the strength of his trust in Jesus, and the ripeness of his religious life. The consolations of our most holy faith were daily and hourly with him. His last communion was within eight hours of his death, and the consciousness that lingered till the last, making keener the final agony, was blessed to be the means through which the holy words of comfort evidently and intensely ‘refreshed his soul.’”

### PROFESSOR SAMUEL F. B. MORSE, LL. D.

By PROFESSOR B. N. MARTIN, L. H. D.

Among the dead of the past year, no name can be found of higher distinction, or more widely known, than that of Professor SAMUEL FINLEY BREEZE MORSE. The world-wide application of his great invention, the many singular and even startling results to which it has given birth, the remarkable extension of it to intercontinental communication, the many valuable results already accomplished by means of it, and the constant suggestion of other and unlooked for uses—all these things have naturally fixed the attention of the world upon the successful author of so great a work, and made his death a subject of universal regret. In consequence of this wide-spread interest, the life and character of Professor Morse have been the theme of very general remark, in all those associations of public and

professional life which have been wont to bring him before the world.

Under these circumstances, it could hardly be necessary to bring his name before the notice of this body in those general relations already so largely discussed.

But, one important relation of his life, that in which he stands connected with our system of education, is yet untouched; and it will be appropriate that a few words should be said here of the character of Professor Morse as an educator, and of his connection with our educational institutions. It is in this light only, that I propose to offer a few remarks upon his life.

Professor Samuel F. B. Morse was born in the year 1791; a date which can scarcely be forgotten by those who take an interest in the man, from the fact that one year ago, his eightieth birthday was celebrated, in connection with the inauguration of the statue which preserves his name and aspect to posterity, in the Central Park of New York city. Educated amid highly intellectual associations, and under the influence of a father who was himself eminent for the culture of an important branch of education, geography, he early developed intellectual tastes, and enjoyed the advantages of a collegiate education at Yale. Choosing as his profession the art of painting, to which he possessed by nature some peculiar adaptations, he gave himself to the cultivation of it with enthusiasm and energy, and achieved a good degree of success and reputation.

Meantime, however, his mind was open to the impressions which the state of our country at that time awakened, in connection with the sudden influx of a large foreign population; and he became the author of a work which made him widely and favorably known to the religious thinkers of the day, and which attested his possession of considerable literary ability.

At length the discovery of magnetic electricity suggested to many persons the possibility of a system of telegraphy; and in 1832 this idea, brought to the knowledge of Morse by Professor Henry, now of the Smithsonian Institution, took a strong hold on his mind. From that time, his thoughts flowed very constantly in the channel thus opened; and he prosecuted with great resolution and patience, the investigations which were to disclose the true method of applying the novel and extraordinary discoveries which were then startling the scientific world.

It had been authoritatively announced by the scientific men of Europe, that electricity could not be conveyed to any considerable

distance. Experiments of a very accurate kind had seemingly decided that the rapid diminution of the power with every increase of distance, rendered the use of it, on a great scale, impossible.

The dissipation of this unhappy and obstructive impression was largely due to the careful observation of Professor Henry. This eminent observer showed in 1831, by experiments conducted both in this city, and in connection with the Albany Academy, in which he was at that time a professor, that the distinction between the two forms of electricity, that of intensity and that of quantity, had been overlooked by the European scientists; and that, with proper discrimination, the electrical force could be conveyed to very considerable distances. In connection with this valuable discovery of Professor Henry, Morse undertook a new series of experiments, which he subsequently prosecuted with great zeal and persistency. At about this period, he became connected with the New York University, and received the appointment of Professor of the Literature of the Arts of Design. In prosecution of the regular work of his professorship, he prepared, with the faithfulness which marked all his efforts, a careful and extended course of lectures, which he delivered for successive years to classes in the University. The art culture of that day, however, was limited, and the number of students in that department small. Some of them, I have heard speak with much interest and approval of Professor Morse's lectures; and a considerable part of the improved culture of more recent days, is due to the growth of the germ of instruction which he then planted in some of the best of our art students.

Gradually, however, his interest in art diminished before the growing enthusiasm which the new project of the telegraph awakened within him; and at length his thoughts became greatly absorbed in his prospective invention. Everything was then crude and dim, and a large field of experiment lay before him,—a tangled wild, through which he was, with laborious care, to make his way. He provided himself with some apparatus, of a very simple and homely sort, I am told, and occupied himself with the more exact determination of facts for the practical application of the electrical phenomena to telegraphic use.

Professor Morse at that time resided in the University building, and was accustomed to stretch his wires around the walls of his room, and through the ample halls of the edifice, which afforded scope for quite a length of circuit. Later, he ascended to the roof, and, stretching his wires around the ample space there open to him,

determined that a considerable length of wire interposed no serious obstacle to the transmission of the galvanic current.

In these experiments, he derived great aid from his connection with the University. The professor of chemistry, then as now, was the eminent Dr. John W. Draper; who, as it happened, was at that time engaged in writing upon electrical subjects. The labors and experiments which attended the preparation of Dr. Draper's work, Professor Morse witnessed with great interest. The laboratory of the Institution, in which Dr. Draper was experimenting, was a favorite place of resort with Morse; and often, in the evenings, he would come down from his lonely room in the upper story, and discuss and consult with Draper, till midnight. These discussions placed Morse in possession of all that was at that time known on the subject; and enabled him to give a more exact and definite character to his own investigations.

When the general facts had been sufficiently determined, it became important to decide by actual trial, whether the force of galvanic electricity could be conveyed in sufficient amount for practical use, through a long circuit of wire. For this purpose Professors Morse and Draper visited a rope-walk in Manhattanville, with eighty rolls of wire of two miles each, making 160 miles of wire, and forming, as was then deemed necessary, a forward and backward circuit of eighty miles. For this distance, the force was found to be practically available; and these experiments, which were numerous and varied, determined the absolute possibility of distant transmission. From that time, the telegraph was, to his earnest and believing mind, a reality.

It was not, however, till the year 1843, that it became such to the less instructed minds of others. Amid many jeers, and against great objection, the inventor obtained a grant from Congress, of some \$30,000, with which to test the practicability of the invention, the priceless value of which he continued to press upon the country. The test was, at first, unsuccessful. The wires were laid in leaden tubes, in which the unoccupied space was filled up with pitch; but the insulation was imperfect, and the plan would not work. The inventor, however, was not discouraged. He again went to work, and adopting the simpler but apparently more exposed method of attaching them to poles, achieved the success by which his name will be forever distinguished in the annals of social progress.

The history of the subsequent improvement and ultimate perfection of the invention, has been elsewhere written; and it is needless

to recount it here. The expansion of the telegraph over the broad area of the country, and of the continent; its extension over the continent of Europe, its remoter reach across the Asiatic continent, through the Russian possessions, and its final triumph in the complete establishment of intercontinental communication across the deep sea, these were achievements which it was the unusual good fortune of the inventor to live to witness. It was his happiness too, to transmit the first oceanic despatch; and still later, to receive on the anniversary occasion above referred to, the congratulations of the telegraphic operators in all the civilized world.

Professor Morse was eminent for his profoundly religious idea of life, and for his earnest wish to promote religious interests. He was the founder of a lectureship in the Union Theological Seminary "On the relations of the Bible to the sciences," from which the friends of sound views may hope long to gather valuable and varied fruits.

He had a high appreciation, moreover, of education in all its aspects. A short time before his death he established a foundation for a department of art instruction in Rutgers Female College; and his will appropriated the sum of \$1,000 for an annual prize medal in the University with which he had formerly been connected.

He passed away, April 2, 1872, in the ripeness of his age, with faculties undimmed, and with his Christian hopes clear and strong. He looked back, to a life of usefulness, and an old age of honor and peace; and forward, to a union with the Redeemer whom he had loved through life, and who in death was his only and all-sufficient trust.

### PRESIDENT GEORGE W. EATON.

GEORGE W. EATON, D. D., LL. D., late president of Madison University and Hamilton Theological Seminary, in the State of New York, was born near Huntington, Pennsylvania, July 3, 1804. In 1805, his family removed to Ohio, where he was afterward prepared for college, and in 1822, matriculated at the Ohio University.

Having remained at the university two years, the circumstances of his father rendered it necessary for him to relinquish his college course for a time, that he might procure funds for its completion. With this object in view he spent two years teaching in Prince Edward county, Virginia, at the end of which time he made, principally on foot, a tour of the seaboard States, as far north as Massachusetts, spending some time at Princeton, New Jersey, and at Andover, Massachusetts, and then, in 1827, entered the junior class



of Union College, at Schenectady, New York, where, under the presidency of the late noted Eliphalet Nott, D. D., LL. D., in 1829, Mr. Eaton was graduated with the highest honors of his class.

In college, he was associated with men who have since risen to places of the highest eminence in civil life. Among his college associates he was highly esteemed for his unselfish disposition, his keen sense of honor, and his generous bearing toward those whose scholarship and college honors did not equal his own.

Having won the personal regard of President Nott, he was, immediately upon his graduation, elected a fellow and appointed a tutor in the college. In this position he remained one year, and then, in 1830, much against the wishes of the president, who, long years after, spoke of the circumstance with regret, he left the college and became principal of Union Academy, at Belleville, Jefferson county.

Having been elected to the chair of ancient languages in Georgetown College, Kentucky, in 1831, he removed to Georgetown, where he remained, during the latter part of the time acting as president, until 1833, when he was called to the professorship of mathematics and natural philosophy, in what was then known as Hamilton Literary and Theological Institution, located at Hamilton, New York, a school which had for its chief object the training of young men designed for the ministry in the Baptist denomination. This institution was, in 1846, chartered as Madison University, and by this action the theological seminary became so separated from the college that, though they occupied the same buildings, and some members of the theological faculty gave instruction also in the college, yet the former was controlled by the New York Baptist Educational Society, and the latter became subject to the Board of Regents of the University of the State. Professor Eaton remained in the chair of mathematics and natural philosophy for four years, and at the end of that time, in 1837, was elected to that of ecclesiastical history in the theological school. In 1844, he received the honorary degree of Doctor of Divinity from his alma mater, and in 1850 was elected professor of systematic theology. In 1856 he was elected to succeed Stephen W. Taylor, LL. D., deceased, as president of the university, still retaining his professorship of theology in the seminary. For twelve years he performed the double duty; as president, giving instruction in intellectual and moral philosophy, at the same time continuing his lectures in theology, until 1861, when he exchanged systematic theology for homiletics.

These arduous labors were unremitted except in the years 1863

and 1864, when, his strength giving way, he sought relief in a European tour, during which he labored earnestly and efficiently to give a true idea of the nature of the conflict then raging in our country. In this tour he formed the acquaintance and secured the personal friendship of many of the most prominent men of Great Britain and the continent, among whom were Cæsar Malan, Merle D'Aubigné, John Bright, Goldwin Smith, Professor Farrar and Dr. McCosh.

In 1868, his physical powers having been so severely taxed for years, he sought relief from a portion of his responsibilities, and therefore resigned the presidency of the university, retaining simply that of the theological seminary, to which he had been elected several years before. Thenceforth, he gave instructions only in homiletics, until, in 1871, he was forced to cease from all active labor. He died on the 3d of August, 1872.

Without attempting to give a full analysis of Dr. Eaton's character, it may be said that physically, intellectually and morally, he was colossal. In his moral nature, love was the reigning element. It predominated everywhere and became a living force. It pervaded every sphere in which he moved. He loved everything good, and even the bad seemed often so covered with his charity that he was slow to see it, slow to hate it. This love would sometimes blind him and make him a victim to the designing. Unsuspicious, he thought other men were governed by the same sentiment that ruled him. "The adder in the pathway would strike at his heel, and the archers sorely wounded him." But when he saw anything mean or trickish, malicious or unjust, he had great contempt, and the scorn and sarcasm with which he visited it were withering.

He was in love with nature, and drew inspiration from the thousand sources of beauty, sublimity and design which are here opened to view. No man could be more in harmony with the outward world. He was in love with God, and communed with him as with an ever-present and sustaining spirit. He was in love with the Gospel, and overwhelmed, at times, with the wisdom and power in it to save man. Skepticism and doubt at this point found with him no lodgment. To this was owing that simple and hearty assent to every declaration in the inspired Word as the end of all dispute; to this was owing that purely evangelical spirit which permeated all his teachings and made his broad and comprehensive views of Gospel truth such a power in the hearts of his pupils. He could say nothing, he could teach nothing that could weaken the foundation of Christian faith. He sought



more to inspire the soul than the intellect, and used often to say that a large intellect without an evangelical heart was a miserable failure in the ministry. It is needless to tell how widely in him love reached. There was no corner in his life which it did not quicken.

He loved, as if an only child, the institution which he served. He loved its spirit and surroundings—he loved the sky above it, the landscape below it, the hills around it—he loved the pious dead that sleep near it. It was this love that made his soul revolt at any proposed violence or infringement on local rights. It touched down into the quick of his nature and aroused indignation.

His intellect, though not compact, was majestic. He was not marked for tact or sagacity or organizing power or generalship: but when he saw clearly an end and the way to reach it, his power was irresistible, for it marshaled his whole nature, and when thus marshaled he was not fearful, but bold and aggressive in executing. He summarily removed obstacles or crushed his way through all opposition. He used no craft, took no advantage except the advantage of force, and delivered his blows straight from the shoulder. His assailant would cower and retire from the contest. There was a majesty, mingled with awe, in his whole mien, when thrown, by some wanton attack, on the defense of truth, or virtue, or right; for he stood a massive frame, rounded out into large dimensions, a singularly winning countenance, with steady eye, and all aglow with earnest emotion and unyielding conviction.

As in his moral nature love swayed, in his intellectual the imagination was prominent. It did not eclipse his judgment, or reason, or conscience, or memory, but it threw its scintillations over all. It kindled an enthusiasm which surrounded him like the fire in Moses' bush, burning, but not consuming. It glowed through his whole soul, and crowned with a halo of light all his intellections. Hence, his power of description was masterly, whether in extemporaneous or written discourse, whether in the social circle or before his class. A scene which he had once looked on, or a landscape that he had viewed, he could reproduce with an accuracy of detail and a fullness that is rarely equaled. His pictures of Paris, his views of Switzerland, and his delineations of some of the distinguished men of England, as seen in his European tour, and many other topics introduced into his lectures and preaching, are in point as illustrations of his happy power of description. So easily was his mind impressed, so retentive, so readily again did it throw off the impressions in the most elegant and appropriate diction, that he became a mirror of

nature, and a living panorama of scenes and transactions in which he had mingled. His power of reproduction equaled his power of description, and past scenes became in his hands a new present.

With such a great and loving heart and massive intellect, kindled up with a chaste and vivid imagination, it is not difficult to see, as the resultant, the type of character illustrated in the person and life of Dr. Eaton. He was simple in his manners, great in his simplicity, genial, rich in his experience, wide of observation, varied in his learning, broad and comprehensive in his views, versatile, eloquent. Above all, and pervading his entire moral and intellectual nature, the religious element predominated. It toned his conversation, his instructions, his preaching, and his public lectures. In all things, Christ was his pattern. His hope was large and full of immortality, and having full faith in the divine efficacy of the Gospel, he inspired the pious young men who came under his instruction with true Christian philanthropy and missionary zeal.

It is proper here to speak of Dr. Eaton as a teacher—an educator. While as a writer he was perspicuous, classical, and glowing; while as an orator he was elevated, fervid, and eloquent; while as a preacher he was catholic, tender, and convincing; while in the command of fit expression he had no superior and but few equals; yet it is as an educator that he deserves here to be spoken of; and justice demands a careful pen. Perhaps his first and most prominent characteristic as a teacher was the enthusiasm with which he entered every department of instruction to which he was called. It was his first business to make himself thoroughly familiar with the whole field of investigation, and he rested not until he had examined every cognate question—encompassed all that could be regarded as valuable in the literature of the subject.

He could never rest while there was another author unread and unweighed. The insatiate thirst for knowledge with which he began never left him through the whole forty-two years during which he occupied the position of teacher; and even after retirement from active duty, he still seemed as anxious, as zealous, for new truth, as unremitting in his investigations and readings, as when he first began his splendid career. Though he occupied so many different chairs, and had occasion to pursue so many different courses of study, he yet seemed as much at home in any one of them as though that had been the one department to which he had given his life.

Another characteristic of the teacher was the enthusiasm which he carried into the class-room and infused into his pupils. When

he taught mathematics, the mathematical spirit seemed to pervade the school. Other professors sometimes complained that the attention of the students was given too exclusively to mathematics. When he taught history, then history seemed to be the prominent subject, and historical themes would be presented on public occasions. And when he taught metaphysics it was the same thing again ; questions in metaphysical science from Kant, Cousin, Reid, Hamilton, and McCosh, came in for discussion, criticism, or approval. In theology, he adhered to the milder type of the Calvinistic system ; and as he unfolded to his classes the, to him, glorious and blessed doctrines of sin, redemption, atonement, and intercession, his whole soul seemed infused into the subject, the tear would often stand in his eye, and, rising from his chair, he would pour himself out in a flood of extemporaneous eloquence, which sent thrills of delight as well as of admiration through the hearts of his pupils. The memory of "the doctor's" lectures and gushes of eloquence lives in the hearts of hundreds of his pupils, as affording some of the highest pleasures of their lives.

In his teachings, he was at the furthest remove from dogmatism. Every point had to be carefully presented, with all the pros and cons, and then the conclusion was drawn from the whole. It was his delight to set his pupils to investigations on their own account, and they seldom left the lecture-rooms without being sent to the libraries to examine some author, with instructions to bring the results of their investigations for consideration at a future day. The consequence of all this was that very few of his pupils ever found occasion to differ with him. He treated their opinions and objections so courteously, and presented the rebutting arguments so kindly, that he disarmed opposition before it had arisen, and the objector felt that his points were fairly met and completely demolished.

Finally, we would mention, as further characteristic of the man, the strong personal attachment formed by the pupil for the teacher, and so warmly reciprocated on his part. It is probable that no man ever spent any considerable time under his instruction without becoming thus bound to him by ties of affection. His appreciation of what was meritorious in the effort of the pupil, and his criticism, so kind and so just, caused him who had most to bear to feel that he was honored by the strictures of his teacher ; and then the sympathy with which he opened his heart to the trials and hardships of those who were contending with poverty, his efforts at assistance where it was within his power, made the most desponding hopeful and the

weakest strong. So deep and reliable was this personal attachment, that his government of the college was hardly known as such. He ruled by love, and so seldom had occasion to resort to other measures that some even thought that "discipline" was a nullity, and yet, during his presidency, he accomplished some of the most difficult feats of discipline which are known to college presidents. What has often shaken other colleges to their very centers and even sent away whole classes, was by him accomplished so quietly that some hardly knew that trouble existed. And it was because of the respect and love of the students, who would not wound the feelings of their president.

It was always counted among the felicities of the alumni of Madison University that they were permitted to experience "a shake of the doctor's hand." His memory will be blessed as long as one of them survives to tell of his love for his old teacher.

His remains lie in the college cemetery, in a spot overlooking the scenes of his life-work and the landscape which he ever regarded with the fondest delight.

#### PROFESSOR EDWARD WALSTEIN ROOT.

EDWARD WALSTEIN ROOT, the second son of Dr. Oren Root, was born in the building now occupied by the cabinet of Hamilton College, July 4, 1841. The place of his birth would have suggested a correct foreshadowing of his tastes, habits and favorite pursuits. He was always fond of the beautiful in nature, in art and in literature. He grew up among surroundings that quickened his native passion for knowing all that can be known about flowers, and trees, and minerals, and the phenomena of nature. Sensitive and delicate in his physique, he had no liking for rude and noisy sports. While others of his age were engaged in boisterous mirth, he found quiet enjoyment in his father's garden or cabinet, or in the society of books and bookish companions. He could not remember the time when the names of the more common minerals were not known to him. One of the triumphs of his boyhood was to master the pronunciation of names that were unusual and difficult. Thus by facilities furnished at home and in the college, he was early initiated into those beautiful and fascinating studies to which his brief life was devoted.

He made his preparation for college with the late Henry P. Bristol, while that most excellent teacher was principal of the grammar school. In college he was a favorite companion, always a diligent

student, and successful in whatever he undertook. His preference for scientific and belles lettres studies was pronounced, and fruitful of results that are well remembered by his classmates and teachers. He made himself familiar with the history of English literature. He exhibited a skill in literary criticism and a maturity of judgment in matters of taste and expression that was remarkable for one of his years. His Clark Prize Oration on "The Earliest and the Latest Poet Laureate," was a brilliant and admirable effort.

In all class rivalries, which so severely test the finer qualities in youthful character, he revealed a noble elevation of spirit, a contempt for all unworthy self-seeking, and a sincere regard for whatsoever things are honorable and chivalrous, and of good report. In expressing opinions, while always courteous to others, he early revealed a certain positiveness of character which resulted from his own clearness of insight, his good sense and honesty of purpose. He was frank and fearless in speaking of men and measures, because he was unselfish, and free from guile, and loyal to the truth. He was cheerful and contented in his nature, and worked with serenity in obedience to his convictions of duty and propriety.

During the year following his graduation in July, 1862, Mr. Root remained in Clinton, giving a part of his time to chemistry, under the direction of Dr. Avery, and a part of it to the study of modern languages. In the summer of 1863 he sailed for Germany, in company with Dr. C. H. F. Peters, of the Litchfield Observatory, and at the University of Berlin, under the direction of Professor Heinrich Rose, he found the best facilities for enlarging and perfecting his attainments in chemistry and kindred sciences. In a few months he had so extended his knowledge of the German language that he could listen with interest and profit to the lectures of German professors. While thoroughly devoted to technical chemistry, he lost no favorable opportunity to make himself acquainted with the agriculture, politics, social customs, literature and art of the German people. His social aptitudes and gifts drew him into relations of sympathy and friendship with some of the best minds in Berlin and Heidelberg.

At the University of Heidelberg, where he passed the second year of his residence in Germany, he enjoyed not only the instruction but the personal friendship of Professor Bunsen. His letters from Germany, though not written for the public, found their way into various periodicals, including the New York Horticulturist, and were delightful as well as profitable reading. His descriptions of scenery

were especially vivid and enjoyable. Whatever he saw left a clear record in his memory, and was faithfully reproduced in his sentences.

On his return from Germany, in 1865, Professor Root was immediately honored with an appointment in the Columbia College School of Mines, as Assistant Professor of Analytical Chemistry. This election was made at the suggestion of Professor Charles F. Chandler, Dean of the Faculty, who had been in correspondence with Professor Root, and knew how well he was fitted for that post. Here he found ample scope for his exact and various attainments in science. Here his thorough methods of instruction were patiently and successfully applied. Here his plans were laid for continued study and new achievements. Here he prepared articles that were published in *Silliman's Journal* and other scientific periodicals. Here he completed his preparation for the larger duties of a more responsible position.

In July, 1868, the trustees of Hamilton College were called upon to make their first appointment to the Chair of Agricultural Chemistry, which had been recently endowed by a liberal bequest from Silas D. Childs, of Utica. Among the alumni and friends of Hamilton College, Professor Root was well known as a successful teacher of science, and was held in high esteem for his literary attainments, his integrity of character, social worth and tested ability. His election to the Childs' professorship, as its first incumbent, gave promise that the good purpose of the bequest would be successfully realized. His first course of lectures on Agricultural Chemistry was delivered to the class of 1869. In July of that year, Dr. Avery retired from the Chair of General Chemistry, which he had occupied for thirty-five years, and Professor Root was elected as his successor.

In August, 1869, Professor Root attended the Chicago meeting of the American Association for the Advancement of Science. While in Chicago he was seized with serious illness. Before he had fully recovered, a visit to the home of his brother, Professor Oren Root, Jr., of the University of Missouri, involved exposure, and was followed by prostration and continued weakness. But his will was resolute and unbending. He returned to his work in college. He carried the heavy burden of daily toil with fidelity and heroic enthusiasm. In the autumn of that year, the laboratory of the college was remodeled under his direction, and furnished with the best facilities for instruction in chemistry. He gave lectures to the class of 1870, and received from them resolutions expressing their entire satisfaction and their high respect for him as a faithful and skilled instructor



The examination of the senior class in chemistry in the spring of 1870, was for him a professional triumph, gracefully won in spite of wasting disease and physical weakness. During all these months of struggle with relentless disease, he exhibited a power of will and of patient endurance that are not often united with so much of gentleness and almost feminine refinement and delicacy of taste.

After parting with the seniors in June, 1870, he decided to try the effect of another voyage to Europe, this time in company with his younger brother, Elihu Root, Esq., of New York.

There was great pleasure in revisiting friends and familiar scenes in Germany. It was something to witness the grand enthusiasm which electrified and united the Germans at the outbreak of their war with France. But there was no real gaining of strength or of hope. While his interest in favorite studies was undiminished, he became conscious that his small remainder of strength was lessening each day. He wanted to revisit Heidelberg, but military obstacles were in the way. Turning southward to the brilliant capital of Austria, he returned through Munich to Geneva and Paris. Each change of place brought a stronger yearning for the endearments and comfort of home. And so in the following September, after a trying and tedious voyage, he again found himself amid the familiar scenes of his childhood, where he could hear the voices that were dearest. He felt that his end was near. He prepared for this religiously and temporally, with the same self-possession and serenity of soul that had marked his preparations for a lecture or a voyage to Europe. His worldly affairs were all arranged, and his worldly goods were disposed of. He had been habitually reticent in matters of religious faith; but his life had been blameless, he had carefully improved his Sabbath privileges, and reverently acknowledged in the presence of his last enemy, that his faith and trust were fixed on Christ.

On the 15th of November, 1870, Professor Root quietly breathed his last. On Thursday, November seventeenth, there was a large gathering of friends and students in the college chapel to express their sorrow for the loss of a dear companion and teacher. The draping of the chapel was in keeping with the dark sense of bereavement that oppressed all hearts. Dr. Gardner read passages of scripture appropriate to the occasion. He was followed with an address by President Brown, whose tender and beautiful tribute to the memory of the departed we have fully used in this obituary sketch. Dr. Upson also spoke briefly and with deepest feeling. It was Dr

Upson's first return to the college after the beginning of his pastoral work in Albany. He came back to speak words of sorrow at the grave of one who was as dear to him as a brother. There was a mournful procession from the chapel to the hillside cemetery, and the mortal remains of Professor Root were carried to their final rest near the graves of his kindred and of others who have done good service for the college.

In some particulars the character of Professor Root was unique, and not to be illustrated by comparing him as a teacher and a man with his predecessors who sleep in the same cemetery. Yet it may be truthfully said that his life and character were adorned and ennobled by something of Azel Backus' warmth of sympathy, something of Henry Davis' strength of will and tenacity of purpose, something of Seth Norton's courtesy and critical acumen, something of Josiah Noyes' enthusiasm for science and rural studies, something of Finley Smith's refinement and literary culture, something of Marcus Catlin's serenity of spirit and pureness of life.

#### TRUSTEE WILLIAM KELLY.

This eminent citizen, born in New York city in 1807, and during his early manhood a successful merchant, retired in 1842, with an ample fortune, to the estate known as Ellerslie, at Rhinebeck on the Hudson; not, however, to spend the remainder of his life in ignoble ease, but to become actively engaged in such avocations as would benefit and enlighten his fellow-men. For several years he was President of the State Agricultural Society, and on his own estate of a thousand acres, practically illustrated the best modes of cultivating the soil and rendering rural pursuits alike profitable and attractive. Reared, as he had been, in a family noted for culture and refinement, he took a deep interest in the cause of education, in all of its departments. He was President of the Board of Trustees of the University of Rochester, of the Vassar College, and of the National Baptist Educational Commission. He was also engaged in the movement to establish a State Agricultural College, at Ovid, and was one of the original trustees of Cornell University. To these and other philanthropic enterprises he generously gave not merely his name and influence, but much earnest work and a liberal share of his income. He did much to improve the character of common schools in his vicinity, by furnishing plans for commodious and tasteful school-houses, selecting pleasant and appropriate sites for them, aiding in their erection and in planting the grounds around them,



visiting the schools, encouraging the teachers, and instituting rewards for the scholars. In the nearest school (in which he served as trustee, librarian and treasurer), not only was this system kept up, but every reward at the close of the term must bear the autograph "William Kelly," or it was of little value in the estimation of the children. Providence seemed to deny him children of his own, that he might bestow his affection upon those of other people. He arranged a beautiful grove near the river, with every convenience for the entertainment of the little folks, who, with their parents and friends, flocked thither by thousands during the summer months of each year. As his reward for all this kindness, he had the satisfaction of being universally beloved, and of observing that, under these educating and refining influences, no acts of vandalism were committed on his premises during all the years in which these summer visits were allowed.

In 1870, Mr. Kelly's health became seriously impaired, and in November, 1871, he sailed for England, taking up his residence at Torquay, in Devonshire, in the hope of ultimate recovery. A cold, however, contracted in London, developed into an acute disease which caused his death, on the 14th day of January, 1872.

His remains were brought to New York for interment, and an impressive funeral service was held in that city, on the 25th day of April. An extended and appropriate "Memorial" of Mr. Kelly, prepared at the request of the State Agricultural Society, by Gen. Marsena R. Patrick, was presented at the annual meeting in January, 1873, and has been used in preparing the foregoing sketch.

## THE METRIC SYSTEM OF WEIGHTS AND MEASURES.

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BY CHARLES DAVIES, LL. D.

Chairman of the Convocation Committee on Coins, Weights and Measures.

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The committee on coins, weights and measures, to whom was referred the address of F. A. P. Barnard, President of Columbia College, delivered before the Convocation at its last annual meeting, have carefully considered that valuable paper. They deem it fortunate that the ablest advocate of the early and general introduction of the metric system has placed upon the records of the Convocation all the arguments in its favor. So grave a question should be analyzed by many minds; for all the lights of knowledge and all the results of experience are necessary to its right solution. Under these convictions, the committee have re-examined the whole subject. They have compared, carefully, this able paper with their former report; and they have sought to do this duty, free from the influence of previous opinions.

### PRESENT STATE OF THE QUESTION.

The committee appended to their former report, adopted by the Convocation at its session in 1870, the law of Congress, passed in 1866, which legalized the use of the metric system in the United States. The system, therefore, has had a legal existence in the country since that date.

The second section of the bill fixed, by a series of tables, the exact equivalents of all the weights and measures of the present system, in terms of the metric system; so that both systems have now the same legal existence, and every unit of the one has its exact or proximate value expressed in a corresponding unit of the other.

That law also provides that the metric system may be used in all contracts, in all dealings, and in all pleadings in courts; hence the two systems are now equally open to the common use of all; and, without further legislation, that one will be ultimately preferred and adopted which, in its various uses, affords the greatest advantages.

## WHAT IS ASKED BY THE ADVOCATES OF THE METRIC SYSTEM.

The two systems having been placed by legislation on a perfect equality, it would seem but just to a practical and sagacious people to leave to their own experience and wisdom the use of either or both of them, as might best suit their convenience. But the friends of the metric system have discovered that its permissive use will not insure its general adoption; that its great theoretical advantages seem to disappear in its practical uses, and that it can make no progress without the aid of compulsory legislation. Wherever it has been introduced, the exclusion of every other system, by penal enactments, has been found necessary. The friends of the metric system are here to-day to give such direction to the sentiments and opinions of this Convocation as shall lead ultimately to that result. Your committee, therefore, understand the question under consideration to be simply this:

“Shall the metric system of weights and measures be adopted in this country by compulsory legislation, and the use of every other system forbidden?”

The committee, in their report, which was adopted unanimously by the Convocation at its session in 1870, considered, very fully, the general relations of the metric system to our own, now in use. As supplementary to that report, they now propose to point out the derangements which the introduction of the metric system would produce in the mechanic arts—in the labor of the country and in the knowledge of the masses, which, beginning in the nursery, is enlarged by daily observation and experience, and is, perhaps, greater in amount than all the information derived from books.

## EFFECTS IN THE MECHANIC ARTS.

This view of the subject has already been partially taken by Mr. Stevenson, a distinguished member of the British Parliament, in a speech in July, 1871, which, doubtless, contributed largely to the rejection of a bill, by the House of Commons, for the compulsory use of the metric system. Mr. Stevenson says: “I would desire to treat this question from a practical point of view, and I believe that no one can have more experience than myself, as a manufacturing chemist, in those calculations and measurements which are alleged to be capable of simplification by the introduction of the metric system. It is asserted that the relation between the measures of weight and of capacity, in that system, is direct and simple, and so it is. We are told that we cannot get this advantage unless we aban-

don our own units of weight and measure, and start afresh with metric units. This is quite incorrect. In my business, the units, one pound and one cubic foot, are constantly used, and are the bases of all our plans and arrangements. In the large leaden chambers, used for the manufacture of sulphuric acid, we provide so many cubic feet of capacity for every pound weight of sulphur burned in twenty-four hours; we can weigh and measure the sulphur and sulphurous gas respectively, in the solid and gaseous state, and afterward determine the quantity of sulphur in the form of liquid sulphuric acid, and there is no difficulty whatever in making such calculations by means of the present units. For instance, we make several hundreds of calculations every week of the quantities of sulphuric acid manufactured and consumed, which is done by ganging the depths of cisterns of known dimensions, and observing the specific gravity of the acid. These cisterns are, as far as possible, constructed so that every inch, or one-tenth of an inch in depth, corresponds to one or ten cubic feet. Then as one cubic foot of water weighs 1,000 ounces, if the acid be of the right specific gravity of 1,600, the weight of a cubic foot of it is 1,600 ounces or 100 lbs.; and multiplying this by the depth, we get the weight of the contents of the cistern in pounds just as easily as a French manufacturer could get a similar result in kilogrammes. No doubt the Frenchman can turn his kilogrammes into his tons more easily than I can, for he divides by 1,000 and I divide by 2,240. And I find no difficulty in keeping our accounts in tons, and the decimals of a ton; and all the statistics of the manufactory are rendered in the same way. And I venture, as far as my experience goes, to contradict the statement of the report of the Standards Commission, that the want of the metric system is not 'unfrequently felt by chemists and engineers of the highest class.' All that they can possibly want can be accomplished by the decimalization of our existing standards, which they can do for themselves, for these are the very classes to whom arithmetical calculations present the smallest difficulty.

"I have made a calculation, that in one manufactory with which I am connected there are weekly upwards of 20,000 separate weighings of fuel, raw material and materials in different stages of manufacture, including about 700 packages of finished product. Only a part of these packages is exported to countries where the metric system prevails; and yet we are called upon by the advocates of the metric system to overturn all these weights for the greater convenience of trade with those countries. Again, the packages I speak of are

casks, of which the sizes are expressed in inches of height and diameter—the staves in fractions of an inch in thickness, purchased at a price for every 1,000 superficial feet, and the cooper who makes them knows what size of cask is required to hold so many pounds weight. But he is now asked to learn a new language, and to bewilder himself with metres and centimetres and kilogrammes.”

“A sawyer has a very clear idea of what is meant by cutting a twelve-inch log into half inch boards; but what notion would be presented to his mind by calling the log thirty centimetres and five millimetres, and the thickness of the boards one centimetre and twenty-seven millimetres? A carpenter has a very clear notion of the size and shape of a joist nine inches by three. But he would fail to recognize these familiar dimensions, translated into the new language of 22.86 by 7.62 centimetres. A plumber, who clearly apprehends what is meant by a sheet of lead, five lbs. to the square foot, would be baffled by the thickness being described as 2.26 kilogrammes to 9.29 square decimetres.” \* \* \* \* \*

“There is a point, in connection with this question, to which I cannot find that any allusion has been made, which, though not immediately arising from the proposed change of the law, would be a necessary consequence of it, and must produce a degree of confusion and loss that no one seems to have contemplated. Suppose you had passed this bill and it had come into operation, and you had dragooned the people into submission to it, and succeeded in sweeping every pound and ounce weight and every yard measure from all the counters and market-stalls in the kingdom, have you even then abolished feet and inches and pounds weight? So far the law would be satisfied; but you would be still far short of your purpose, for there would remain an indefinitely long period of transition and confusion. There are countless manufacturers that turn out articles of definite sizes and definite weights, and these weights and sizes are part of the name of the article. The simplest illustration of what I mean is such a case as that of candles, the moulds of which are made so as to turn out sizes of four or six or eight to the pound. These sizes would be quite incommensurable with similar numbers of candles to a kilogramme; and if the phrase “six to the pound” were to become illegal under the bill, I am at a loss to know what the candle maker would have to do, and what word a housewife would employ to express her accustomed size of candle, and how she is to know if her six candles weigh a pound when the pound weight is illegal and unknown.”

“I have beside me a large collection of price lists, and it is appalling to see what confusion would be introduced into all dealings with the articles named, by their becoming unrecognizable under the new names of the metric system. Here is illustrated a sheet of hinges—of many various sizes—and all these sizes are expressed in inches, and halves, quarters and eighths of an inch. Are such names as ‘2½ inch hinges’ to be illegal under this bill, and to vanish from the English workshops? If so, how will a workman recognize the size he has been accustomed to when he wants to buy some more of them; and if not so, then what becomes of the boasted simplicity of a single system for the whole world, when even in our own country we shall be only burthening our thoughts and language with a new one in addition to the old and well understood system.”

“A hardware merchant’s price list would furnish me with endless instances of the way in which the present units of size enter into the names and classification of articles of trade. Screws and bolts, used in millions, are all made to the common fractions of an inch, not decimal. Workmen’s tools, such as chisels, augers, etc., are known by inches and the fractions of an inch—sizes wholly incommensurable with metrical numbers. Are we to give up making and using half inch, three-quarter inch, or inch diameter gas-pipes, with all the taps and couplings and reducing joints, made to fit those sizes?”

“I have in my hand a price list of a dealer in soft goods, and there, too, I find that in numerous instances feet and inches are used as a part of the essence of the names. In the Manchester yarn market, the great staple quoted is 40’s. What is this? It is a yarn spun of such a thickness that forty hanks, measuring each 840 yards, weigh one pound. What is this to be called, when pounds and yards are abolished? Again, the fineness of cloth is expressed by saying 16 by 16. That is, these figures represent the number of threads of the warp and weft running each way in a square of a quarter of an English inch, and this notation is understood in all the continental markets. Every Indian commercial telegram quotes seven pounds and eight and a quarter pounds sheetings, referring to and defining the cloth of which these weights contain so many yards. Must Manchester find, in the metric notation, some complex equivalents for these simple and convenient numbers?”

“I should only weary the House were I to enumerate many more cases, in which it would be extremely costly and inconvenient, if even possible, to alter the sizes of articles based upon the present units. Does any one expect that ironmakers are to give up rolling

one-inch bar iron, and all the endless sizes and shapes of bars founded on inches? Is three-fourths-inch boiler plate no longer to be known in the trade, or is it to be known only in some long decimal of metric terms? Are all our gasmeters, which register cubic feet, to be destroyed and replaced with metrical ones, and the prices of gas to be readjusted to the cubic meter? After the passage of the bill, is it to be illegal for the National Rifle Association to offer prizes at Wimbledon for the best shooting at 1,000 yards? And are all our rifles to be resighted, and the fuses of shells to be graduated at Woolwich in millimetres, instead of tenths of an inch? Are all the mile-stones on our highways to be shifted, and parliamentary trains, at one penny a mile, no longer to be spoken of?"

The committee have quoted largely from the speech of Mr. Stevenson, because he is both a legislator and a manufacturer, and has seen, face to face, the difficulties in making radical changes in a system of weights and measures to which a people have been long accustomed. Every word he has uttered is equally applicable to the changes proposed in this country. The committee will present a few examples from our own workshops, illustrative of what he has said.

#### BUTTS AND HINGES.

The committee addressed a letter to the Scovill Manufacturing Company, at Waterbury, Connecticut, asking for the price list of butts and hinges made in their establishment.

There are, on this list, 155 different sizes of butts and hinges, all the dimensions of which are expressed in inches and the fractions of an inch—the fractions used being one-half, one-fourth and one-eighth. The inch, and the fractional units, one-half, one-fourth and one-eighth, are the four simple elements of that comprehensive language which pictures to the workmen the exact size and dimensions of every hinge and butt, and also the relations of each part to all the others. If we change the unit one inch to the meter, with its decimal divisions, what will follow? The inch has no exact equivalent in the new system of numbers. The dimension nearest to it is the centimeter, equal to four-tenths of the inch, very nearly. Three of these parts exceed the inch by about two-tenths. Now, give to the master workman of this factory the meter, with its decimal divisions, and note the result. Not a single hinge, or butt, or pattern, or piece of machinery in the entire shop will be commensurable with the new unit, and therefore can only be measured by it, approximatively. Hence, in the new numbers the parts of the butt and hinge are not



commensurable with each other, and the same is true for all the moulds and the machinery. The change, therefore, of the unit of length in this establishment would carry with it the necessity of changing the dimensions of every hinge and butt, and of every piece of machinery with which they are fabricated, for all acknowledge the necessity of exact relations between the standard and all the parts which it measures. Therefore, when we change the unit of measure and the scale of numbers, we necessarily change the *things themselves*. The language is also changed. Its elements are no longer the simple units, one inch, one-half, one-quarter and one-eighth, but become complex decimals of the meter, which is said to be the one ten-millionth part of the distance from the equator to the pole.

#### STEAM ENGINE.

The committee obtained from the superintendent of the Fishkill Landing Machine Works a working plan of a steam engine of twenty-five horse-power, with many of the dimensions marked thereon. It lies on the table, and the committee hope that every member of the Convocation will examine it, before voting on the acceptance or rejection of this report. This working plan is accompanied by a statement of the superintendent, setting forth the whole number of parts of the machine, and also the number of different parts. There are, it seems, 468 parts in all, and 147 different parts. He has also given the number of dimensions of a single part, which he regards as a fair average of the whole. There are, in the part so selected, twenty dimensions, nine of which are expressed in terms of the inch, and eleven in terms of the inch and its fractions. In the 147 different parts of the engine there are, therefore, 2,940 different dimensions, 1,329 of which are expressed in exact inches, and 1,617 in inches and the fractions of an inch, the fractions being one-half, one-fourth, one-eighth and one-sixteenth.

We have thus considered one article of manufacture, the butt, and one machine, the steam engine. If to these we add the screw, used in all kinds of machinery and in all structures, remembering that all its dimensions, including the delicate adjustment of its threads, are expressed in inches and the fractions of an inch, we shall get some just idea of the use and value of this unit. If we run through the whole circle of the mechanic arts we shall find that the inch and its fractional parts are the guides in every work-shop of the nation. They are the elements of that comprehensive language in which science speaks to labor — in which every mechanic thinks and reasons



—in which he reads his scales and his working plans, and in reference to which all his tools have been constructed. If this language is changed to one having no equivalent elements, a curtain of darkness will be drawn between science and labor; for, every part of every article fabricated in the country will not only have its numerical name changed, but must be made of a different size, that its dimensions may be commensurable with the new unit.

In the practical knowledge of the mechanic arts the various parts of a machine or structure are understood, remembered and used, by considering, separately, the numbers which represent the parts, and not by considering the ratios. Hence, the introduction of this new language would obliterate, to a certain extent, all present knowledge. We should have to begin with new sets of machinery and new tools. We should have to teach new things in a new language, having no synonyms with the one now in use. This confusion in the mechanic arts would be about the same as would take place in our social relations if we were forbidden by law to speak any language except the French.

#### GENERAL CHANGES.

Besides the changes which the introduction of the metric system would produce in the mechanic arts, there are others which would follow of very grave importance. The committee in their previous report, stated the fact, that the introduction of the metric system would give a new name and a new numerical value to every measured distance in the country, and also a new name and a new numerical value to every piece of land. This would, of course, carry with it the necessity of changing the records of all real estate. For a century, at least, there would be a constant conflict in the public mind between the old language and the new — between the *foot* and the *meter*, the *acre* and the *are*; and the beautiful system adopted in the survey of the public lands, where the unit, one acre, is an exact part of the quarter section, of the half section, of the section, of the mile square and of the township, would be entirely destroyed, for the new unit, one *are*, is not commensurable with either of these quantities. In our cities the lots are all laid off and described in feet and inches. What would be the labor and the complexity of reducing them to the meter, with which they have no common measure, and of changing all the records to correspond thereto. The weight also and the measures of length and capacity being all changed, there would be corresponding changes in the price of every article bought or sold by

weight or measure, and the whole barter and trade of the country would be thrown into confusion by a new language, new scales of numbers and new prices. There would, in addition, be many changes in material things. Every weight, and measure, and scale, in every farm-house, in every grocery store, in every wholesale establishment, must be changed, and new ones substituted, made according to the laws and in harmony with the metric system.

#### NOMENCLATURE.

Mr. Adams, in his report, has truly remarked that the nomenclature "is a part of the metric system which has encountered the most insuperable obstacles in France," and what was said of France is equally true of every country where its introduction has been attempted. This is due, in part, to the unwillingness of a people to change terms in common use and to which they have been long accustomed, and partly to the construction of the system itself.

The system embraces four branches: linear measure, in which the unit is the *meter*; superficial measure, in which the unit is the *are*; measure of capacity, in which the unit is the *litre*; and weight, in which the unit is the *gramme*. Every word in the language of the metric system is composed of two parts, one part expressing the base unit, and the other denoting how many times, or parts of a time, the base is taken. Thus, we say, decameter, decimeter; hectare, centiare; decalitre, decilitre; decagramme and decigramme.

In each of the four branches, every word presents to the mind the base unit, and how many times that unit is taken, and the signification of the word is not understood until both its elements are distinctly apprehended. The mind analyzes a denominate number but in one way. First, to find its base; and secondly, to find how many times or parts of a time the base is taken. Hence, in the language of the metric system *the base unit is constantly presented to the mind*.

Instead of making the ascending units bases of successive aggregations, as in our present system, where we first aggregate on the smallest unit, the inch, then on the foot, then on the yard, then on the rod and then on the mile, we are obliged to express all distances, great and small, by aggregating and dividing the meter. This gives us numbers incomprehensibly great for large distances, and very minute fractions for all small measures. Were we to adopt the yard as our only unit of linear measure, the mile would be expressed by 1,760 yards, and the inch by one thirty-sixth part of a yard. Would there

numbers present to the mind as distinct ideas as one mile, one inch!

When we applied the decimal scale to our currency, where it is specially applicable, we did not use the cumbersome nomenclature of the metric system; we did not say decadollar for eagle, decidollar for dime, centidollar for cent, and millidollar for mill; and yet, this is the cumbersome language which the advocates of the metric system would introduce into the mechanic arts, and into the every-day business of life. Carrying the base unit through the entire language of numbers makes that language cumbersome and obscure. Ought we, then, to adopt a language of numbers in which the base unit is constantly repeated, and in which Greek, Latin and French terms are substituted for the sharp, short words of our own tongue to which we are accustomed? Ought we to introduce this longworded language, exclusively, into our elementary school books and the nursery, where the first instruction in numbers must always be given?

#### DECIMAL SCALE.

In regard to the decimal division of the unit, Mr. Adams has truly said, that it is a perfect contrivance for computation, but inapplicable in the division of material things. The half, the fourth, the eighth and the sixteenth, certainly appear to be the natural divisions in the descending scale of numbers; and the fact that these fractions are found in all the workshops, and so far as the inquiries of the committee have extended, the decimal division nowhere, would go to show that they are the most convenient divisions wherever mind handles matter. Indeed, after the French system of numbers had been adopted, provision had to be made, by law, for the use of the half and the double, of each denominate unit, so that the decimal division, in regard to material things, has been virtually abandoned, even in France,

But there is no occasion for introducing the metric system, exclusively, in order to obtain the full benefit of the decimal division. We have it already — in our scale of abstract numbers — in our currency and prices, and in all the computations growing out of them — in our land surveys, where the chain is divided decimally and the products, in computation, can always be expressed in decimals of an acre — and in all the processes of leveling, where the entire work is expressed in feet and decimals of a foot. In fact, the tact and practical sense of the American people have already adopted the decimal system, with our own simple nomenclature, in nearly every case to which it is applicable.

## ORIGIN AND SUPPORTS OF THE METRIC SYSTEM.

The metric system had its origin in the storms of revolution, and has been sustained by speculative philosophy, by commerce, and by compulsory legislation. The hatred of a king abolished the *pied du roi* and gave to the world a new system of weights and measures. Speculative philosophy, enchanted by the vision of a common weight and a common measure for all mankind, has embraced and urged forward a theory in opposition to all practical wisdom. Commerce, which regards the whole world as its appropriate sphere of labor and enterprise, and the interest of trade as paramount to all others, caught the inspiration of the new theory, which promises to enlarge its boundaries and multiply its profits. But it was found that this new theory, promising so much, deranged the mechanic arts, interrupted labor, changed prices, and was the parent of general confusion. For nearly a quarter of a century this contest went on in France, the birthplace of the system. The people finally prevailed, and the old system was essentially restored to them. But a new revolution gave new powers to the government and all the old weights and measures were finally swept away by compulsory legislation. How tenaciously the people clung to their old methods, which had sprung up from their necessities and were specially adapted to their wants, is fully shown by Mr. Stevenson, whom we have already quoted. He seems to have made the tour of Europe for the express purpose of collecting information in regard to the operations of the metric system in those countries where it has been introduced. Here is a part of his testimony:

“There (the north of Italy), the meter is adopted, and yet I bought one of a stock of a workman’s rules, at Chatillon, of the length of twenty-four old inches, and jointed to suit those inches, and graduated on one side in inches, and on the other side in centimeters, the twenty-four inches being rather more than a meter. I found a similar rule in use by workmen on the shores of Lago Maggiore.”

“At Mulhausen, which, though recently detached from France, has been subjected to the same long course of metric legislation, I found that the meter rules, in stock, in a large hardware shop, were graduated one side into 100 centimeters, and on the other in thirty-six ‘pouces’ (inches), showing that the ‘système usuel,’ permitted in 1812, still retains its hold, although now illegal, and the necessity felt for having such a unit as the inch. In the same shop I saw some tools for cutting to various thicknesses, and the scale on which the cutting edge moved was graduated in these inches. I found also that

the various lengths of nails were described as inch, inch and a half, etc. Thus, the language of the law, after nearly a century of legislation, has not eradicated the old language of the workshop in the parent country of the metric system." Thus, the twilight of the past yet lingers in the horizon of labor, in despite of all penal enactments.

#### PRESENT STATE OF THE CASE.

The two standards of length to which the attention of the world is now directed are the imperial yard of England and the meter of France. The former is thirty-six inches in length, and the latter thirty-nine inches and thirty-seven hundredths. The former is divided into feet and inches, and aggregated according to our scales of denominate numbers; the latter is divided and aggregated according to the scale of tens. The question presented to us is simply this: shall we increase our standard three inches and thirty-seven hundredths, adopt the decimal division exclusively and introduce into our language the French nomenclature?

At first sight it seems incredible that so small a change in the standard should produce such radical changes in the entire system. But the standard is the first element in the language of numbers; when it is changed all others dependent upon it must be changed also. If, at the same time, we change the scale of numbers and the nomenclature, we have an entirely new language, and can readily see the confusion which must follow. To this is superadded the attempt to extend the decimal scale, so admirably adapted to computation, to the divisions of matter and to the mechanic arts, to all of which it is utterly inapplicable.

#### COMPULSORY LEGISLATION.

If we adopt the metric system by compulsory legislation, and exclude every other, how are we to bridge over the interval which must elapse before the people become educated in it? If we permit the use of the old weights and measures, theory and experience both show that they will never be abolished. If their use is forbidden, how can we instruct the people in the use of the new ones? Besides, how can we furnish, in the whole range of construction and the mechanic arts, the parts and pieces, in the old measures, necessary to supply wear and tear and the dilapidating effects of time?

**PEOPLES WHO HAVE ADOPTED THE METRIC SYSTEM.**

It is claimed by President Barnard that the metric system, having been already adopted extensively, and being the only system having any claims to universal acceptance, must finally become the system of the world.

How far the metric system has proved acceptable to those countries where it has been introduced, the committee have no positive and conclusive evidence. That the struggle was long and sharp in France, is well known, and the testimony of Mr. Stevenson assures us that, after nearly a century of legislation and trial, the old system is clung to in the work-shops. The committee feel assured, from information on which they can rely, that, if it were possible, the French people would to-day abolish the metric and return to the old system. But, with the exception of France and Germany, the countries which have introduced the metric system have experienced little of its effects on the mechanic arts. In England, where the subject has been long considered, and after much discussion, a bill to render the system compulsory was rejected by Parliament in August of last year. It is quite obvious that we should take no step in the matter, except in conjunction with England; for with that country we are most intimately connected by the ties of a common language and an extended commerce.

But the committee do not rely much on these external evidences of the workings of the metric system. They have confidence in science and in philosophy. They do not believe that an educated and practical people will upset and derange their entire system of mechanical labor — change all the measures of their agricultural products — all the weights to which they have been accustomed, and all the measures of their land, for the sake of enjoying common and inconvenient units with the rest of the world. They do not believe that the advantages of uniformity are great enough to compensate for an entire change in all the language of number and quantity, and the substitution of a new one, compounded of the Greek, the Latin and the French. The following are the conclusions of the committee:

1. Considering the intimate relations between words and things, and that by use in their elementary forms they become almost identical, we deem it unjust to a people to take from them, by law, the simple language of number and quantity to which they are accustomed, and to substitute therefor the cumbrous phrases of a foreign tongue.

2. Considering the great changes and confusion which the introduc-

tion and exclusive use of the metric system would produce, in our language, in our elementary ideas of number, in our domestic trade, in our deeds of record, and in the mechanic arts, we should deem such introduction a public misfortune.

3. Considering that by the comity of nations each should not be insensible to the common interests of all, we commend the liberal spirit of legislation which has placed the metric system on the same footing with our own, and deem that this is all which its friends have a right to ask.

CHARLES DAVIES, *Chairman.*

ALBANY, *August 7, 1872.*



## THE METRIC SYSTEM OF WEIGHTS AND MEASURES.

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of New York City.

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### REPORT OF THE MINORITY.\*

*Mr. Chancellor and Gentlemen of the Convocation:* The minority of the committee appointed in 1869 to consider and report what further steps, if any, may be necessary in respect to the Metric System of Weights and Measures, respectfully submit the following:

It is with extreme regret that we cannot concur with our distinguished colleagues who constitute the majority of your committee. But the interests of science, of commerce, and of civilization alike constrain us to dissent from the views expressed by them, and to enter a respectful but earnest protest against the conclusions at which they have arrived. These views and conclusions, coming from gentlemen who are eminent for mathematical and legal learning, and therefore ought to be able to appreciate the incongruities and absurdities of the present system, are, we confess, very extraordinary. The more so, since the distinguished chairman, over his own signature, so recently declared his "conviction that the Metric System is nearer perfect than any which can be reached, and that its adoption would greatly simplify and abridge all the applications of numbers to the various operations of commerce and business." The explanation of these extraordinary views, and this radical change of opinion, is chiefly found in a misconception of the aims of the friends of metrological reform, and of the practical working of the Metric System, if introduced into our country.

The report of the majority assumes that the friends of metrological reform demand the *adoption* of the *Metric System*, and the exclusion of our *present system simultaneously*. They assert that the question is, "Shall the Metric System of Weights and Measures be adopted by compulsory legislation, and the use of every other system forbidden?" They accuse "the friends of the Metric Sys-

\* NOTE.—It is stated in the preface to the report of the majority in 1870, that "Professor Thomson has not acted with the committee, and is of course not responsible for its doings." It is due to him to say that the reason he did not act with them was because he had no knowledge of their action until after their report was submitted to the Convocation.



tem of being here to-day to give such a direction to the sentiments and opinions of this Convocation as shall lead to that result." Again, they declare that "wherever the Metric System has been introduced, the exclusion of every other system, by penal enactments, has been found necessary." Allusion is also made to "dragooning the people into its use;" "fierce conflicts" are predicted in this country, where "the people are free and less habituated to blind obedience to imperial edicts." We have heard, Mr. Chairman, of the "Poetry of Mathematics." Here we have a specimen of what may be called *Sensational Mathematics*. These mathematico-sensational flourishes, if they have any meaning, assume that the friends of the Metric System have some sinister design concealed under the garb of metrological reform; that their aim is to take the people by surprise; to cheat them out of the old system and force them into the immediate use of the new.

We beg leave to assure the Convocation and our colleagues, whose prolific imagination has pictured these frightful scenes, that the advocates of metrological reform in this country repudiate all such designs. They neither ask nor desire such legislation. Their object is alike *pacific* and *beneficent*, and, while they pursue it with untiring zeal, they intend to employ no other than peaceful measures.

#### The Object of Metrological Reform.

The aim of the advocates of metrological reform is:

*First.* To establish a *uniform, international system* of weights and measures, of such a character that its base and derivative units shall be *commensurable* with each other.

*Second.* That its *derivative* units shall *increase* and *decrease* by the *decimal* or a *uniform* scale.

*Third.* That its different denominations shall be designated by a *convenient, common nomenclature*. The manner by which they hope to secure this reform will be explained hereafter.

The origin of the present system of weights and measures is veiled in obscurity. We received it from the father land; England borrowed it from Rome, Rome from the Greeks, the Greeks from their ancestors, and so on to a remote age. Whoever may have suggested its *original* units, the grain, the barley-corn, the hand, the foot, etc., and whatever may be said of the fitness of these standards of comparison, certain it is, the *details* of the system were not the offspring of philosophical research, but of ignorance or chance. Yet amid the rise and fall of States and Empires, and all the political

revolutions that have swept the earth during the past 2,000 years amid the gigantic conquests in science, in agriculture, and in commerce; amid the vast improvements in simplifying and abbreviating mathematical computations, which followed the introduction of the decimal notation into Europe, strange as it may seem, the essential features of this anomalous system of weights and measures which sprung up in the world's gray dawn, held undisputed sway over all enlightened lands down to the commencement of the nineteenth century, and is still in vogue among all the English-speaking peoples of the present day. True, our Anglo-Saxon fathers expanded it into *different kinds* of weights and *different kinds* of measures, and substituted the foot and arm of some modern hero or potentate for those of an ancient or fabulous predecessor; but its leading features are still essentially the same, with its absurdities not only *unmitigated*, but *increased*. However well the system may have answered the few and simple wants of *remote* periods of antiquity, we need not say that it is *totally inadequate* to the present advanced age; an age in which space is annihilated by the applications of science, and knowledge is communicated from land to land by lightning lines stretching around the globe.

#### Objections to the Present System.

Among the numerous objections to the present system are:

*First.* The standards by which its *base-units* are determined, are *arbitrary* and *perishable*. These characteristics destroy all confidence in the experiments and researches of other ages and countries, encourage fraud, defeat the ends of commercial justice, and thus weaken the bonds that hold society together.

*Second.* Several of its base-units are *incommensurable* with each other. Thus, the linear rod ( $16\frac{1}{2}$  feet) is incommensurable with the hand, the foot and the yard; the square rod ( $272\frac{1}{2}$  square feet) with the square foot and the square yard; and the cubic foot, the bushel and the gallon, with each other, etc.

*Third.* Its base-units are also incommensurable with the base-units of all other systems of metrology. Weights and measures are the necessary instruments of commerce. Hence, incommensurability of the base-units of the weights and measures of different countries, is a serious obstacle to diplomatic and commercial intercourse.

*Fourth.* The scale of increase and decrease is *irregular* and *variable*. It ranges all the way from 2 to 1,728; and, as if to complete the inconvenience and absurdity of the system, *ten* of these ratios are *mixed numbers*.

Taking the hand and foot as base-units, the application of the decimal scale to the various denominations arising from them is impracticable; for 10 hands are *more* than a foot, 10 feet *more* than a yard and *less* than a rod, etc.

*Fifth.* Most of the *terms* by which its 70 *different* denominations are designated, are *primitive* words, and are neither suggestive of the thing signified, nor have they any analogy to each other to aid the learner in remembering them.

*Sixth.* Its *nomenclature* is a monument of confusion and absurdities. It employs *three* nominally different pounds besides the money pound, *three* kinds of length measure, and *four* kinds of capacity measure. In the subdivisions it employs 9 terms in *two* different senses, 4 in *three* different senses, and 5 in *four* different senses; while the term ton, is used to signify a long ton, a short ton, a cubic ton, a shipping ton, a register ton, and a liquid tun. These double, triple and quadruple significations of the same word, make uncertainty more uncertain, and, taken together, form a medley calculated to bewilder the brain of the child, and blast all the redeeming qualities of the system.

*Seventh.* Owing to these great irregularities and apparent contradictions, the system necessarily consumes a *vast amount* of *time* and *labor* in learning it, and, when learned, is difficult to retain.

No one who has ever mastered these tables of weights and measures, and their applications, can forget the *time* and *toil* the victory cost him; and some, no doubt, can call to mind the *tingling sensations* which sometimes accompanied these efforts. And yet there are few, it is believed, who appreciate the *amount* of time and labor thus expended. Lord Brougham, after extensive consultation with teachers, came to the conclusion that "*one-third* of the time spent in mastering arithmetic would be saved by the adoption of a *decimal system* of weights and measures." Prof. Barret, a distinguished instructor for the artillery service, thinks "*two years* might be saved;" and Prof. De Morgan asserts that "the time devoted to arithmetic might be reduced by *one-half*, if not more, by the introduction of a decimal system." The opinions of practical teachers in our own country, who have been consulted as to the time consumed on this part of arithmetic, range from *one and a half* to *two and a half years*.

Assuming the *arithmetical mean* of these opinions as the standard, it takes pupils *two years* to acquire a tolerable knowledge of the system. The population of these United States, in round numbers, is 40 millions, and the average age of man  $38\frac{1}{2}$  years. In  $38\frac{1}{2}$  years, then,

a whole generation of 40 millions of children is to be educated. If one pupil wastes *two years* in mastering the present system, 40 millions of pupils must waste 80 *millions* of years in a single generation. And if we multiply these 80 millions of wasted years by the countless generations in our own and other English-speaking lands, whose intellects have been and still are trammelled by these *shackles*, the product swells beyond comprehension.

Moreover, after all this toil and expense in storing away these incongruities, how often the memory fails to reproduce them. How few people, how few men, even of liberal culture, can change Troy to avoirdupois weight, or liquid to dry measure, and *vice versa*, without the help of a book? How few can even read the cabalistic characters which represent the denominations of apothecaries' weight, and which so effectually conceal from the people not only the art of healing, but also the ignorance and blunders by which druggists and druggists' clerks every month, send so many to untimely graves.

*Eighth.* But the waste of time and toil caused by the system are not confined to childhood. It follows our young men from the schools to the counting-room and custom-house, and subjects them to immense inconvenience and labor, in regulating their accounts and adjusting the duties required by law. It presents its formidable front to the countless multitudes who throng the busy marts of trade, and imposes upon them also an intolerable burden in computing the quantities of the manifold exchangeable commodities embracing the products of the earth and of human industry, as coal, minerals, lumber, fruits, cereals, etc., and manufactures, from the coarsest to the finest fabrics. We hazard nothing in saying that the time and labor of the *thousands* of business men who are daily engaged in computing the values of these exchangeable commodities through the instrumentality of our present weights and measures, would be diminished a *hundred fold* by the substitution of a uniform international system of metrology founded upon the decimal scale.

The last objection to which we would advert, is the great hindrance which the system presents to the progress of science. We have seen that the base-units of the system are not only incommensurable with each other, but also with the base-units of all other systems of metrology in Christian lands. To appreciate the obstructions which the system interposes to the progress of science, let us briefly refer to the abnormal and inconvenient relations between the different denominations of the linear unit to those of capacity and weight by which they are determined. The books tell us that a cubic

foot of water is equal to 1,000 ounces avoirdupois. But this is merely its approximate weight, and in exact calculations must be taken with many grains of allowance.

According to the experiments of Mr. Hassler, a cubic foot of distilled water, at its maximum density, weighs only 998.0607 ounces, the bushel is equal to 1.24444 cubic feet, or 77.6274 pounds, and the gallon to 0.13368 cubic feet, or 8.38888 pounds of distilled water at its maximum density. Now, suppose the chemist or scientist wishes to deduce, by exact calculation, the weight of a body from its capacity, or its capacity from its weight, an operation of daily occurrence, who can estimate the expenditure of time and labor of a single operation?

And when to these unnatural relations between its own different denominations, we add the fact that its base-units are incommensurable with those of all other systems which, until recently, have prevailed in civilized lands, who can fail to see that the vast amount of time and labor required to change the results of experiments from the denominations of our system into those of another, has been and still is a most *serious hindrance* to the progress of science? With this incubus hanging over the world, the knowledge of one nation, in the language of Professor Hoffman, "is practically a sealed book to the students of others."

In view of these objections, we are brought to the inevitable conclusion that there is an *urgent necessity* for metrological reform; that the interests of commerce, of science, and of civilization, imperiously demand a uniform, international system of weights and measures.

The great problem is to find a system in which the entire family of civilized nations will unite.

#### Characteristics of a Universal System.

All agree that the *base-unit* of a universal system should be a *common measure* of all its derivative units; that its *derivative units* should increase and decrease by the *decimal* or *some uniform* scale; that its denominations should be expressed by *convenient* terms; and that its *standard* unit should be such as will remain unchanged from age to age; will be secure against accident and fraud and the ravages of time; one that may be verified when desirable, and restored if lost. In a word, that it shall be *invariable*, *indestructible* and *reproducible*. Fortunately for man, nature presents two such objects, each of which combines the three qualities of *invariability*, *indestructibility* and *reproducibility*, viz.: the *linear dimensions* of the earth and the *linear measure* of its *attractive force* embodied in the pendulum vibrating seconds.

Huygens, a distinguished Dutch astronomer, suggested a meridian as a standard as early as 1685, and the commission adopted it as the base of the *Metric System* in 1791. Cassini, of Paris, suggested the pendulum as a base about the commencement of the last century. England adopted this standard in 1824, and declared the length of a standard yard to be 36 inches, *such* that 39.13929 of them are equal to the length of a pendulum vibrating seconds in *vacuo*, at the level of the sea, in the latitude of London.\* As these two are the only systems whose standards are based upon the laws of nature, and are already in extensive use, it is the opinion of distinguished scholars that the choice of a universal system must lie between them. Let us briefly compare their claims.

While the advocates of the English system insist on retaining the "short, sharp terms," now employed in its nomenclature, they generally admit that its derivative units must be brought into *commensurability* with its base-units, and the increase and decrease of its denominations into *harmony* with the *decimal* or a *uniform* scale, in order to make the system acceptable to the great body of nations.

#### Felton's Proposed System.

Among the various plans embodying these changes, the most popular that has come under our notice is the one developed by Mr. J. H. Felton, of England, and recently indorsed by the joint committee of the Chamber of Commerce and the Geographical Society of the City of New York. Its outlines are as follows:

The *unit* of *linear* measure is the present legal *foot*, which is subdivided into *inches* and *seconds*, and has only one *multiple*, which is called a *rod*. These denominations increase by the scale of ten; 10 seconds making 1 inch, 10 inches 1 foot, 10 feet 1 rod.† In square or surface measure, the link, the chain and the acre are the same as ours. The proposed denominations are *links*, *staves*, *reeds*, *plats*, *chains* and *acres*, which increase by the scale of 10. The present *legal pound* is the unit of *weight*, the subdivisions of which are called *grains*, *scruples*, *drams* and *ounces*, and its multiples are *stones*, *hundreds* and *tons*. The unit of *dry* and *liquid* measure is the *gallon*,

\* It is worthy of notice, that when this standard yard, so formally adopted and carefully deposited in the national archives, was destroyed by the burning of the Houses of Parliament, in 1834, a new yard, the one now in use, was formed, not by resorting to this pet standard of the pendulum, but by a comparison of all the scales and measures of any authority which could be collected together. And why? Simply because the former identical yard was wanted, not a different one, which, it was apprehended, from certain errors that had been pointed out, might result from a remeasurement of the pendulum.

† The *rod* is the highest denomination employed; because, it is urged, the *furlong* is practically obsolete, and the *mile* is not a measure of commerce.



which contains 10 pounds avoirdupois of distilled water. Its divisions are called *grains*, *scruples*, *drams*, *gills* and *pints*, and its multiples *ankers* and *tuns*.

The chief arguments in favor of this system are: *First*. That its *nomenclature* consists of short, English words which are familiar to the ear. *Second*. Its *principal units* correspond in name with those already in use. These are plausible considerations. If we can pass from the present heterogeneous patchwork system to one that is acceptable to the brotherhood of nations, so easily as here set forth, the change is an object devoutly to be wished. But let us analyze the plan here proposed.

It is first assumed that children have a clear and definite idea of the meaning of the terms of the present system, because they are familiar to the ear. But however familiar to adults, everybody knows they are *new* and *strange* to children. Again, of the 26 terms or denominations which it employs in the four measures of distance, surface, capacity and weight, only 5 of them are taken in their present signification, 21 have new definitions, and 3 are used both in measures of weight and capacity, and therefore have a double meaning. The gallon or unit of capacity, differs from the present dry or liquid gallon, and therefore has no claim arising from present use. The foot, the chain and the pound are the only three of its units now established by law. Aside then from the antipathy to new words which led our ancestors to misrepresent the exactness of numbers, by calling 16 a dozen, 112 pounds a hundred weight, etc., an antipathy largely inherited by their descendants, the reasons in favor of this system are reduced to two—*First*. Three of its units are established by law. *Second*. Five of its terms are taken in their present signification.

#### Difficulties in Decimalizing our Present System.

The plan proposed to remedy the objections to the present system of weights and measures, has numerous and grave defects.

1st. Several of its units are *incommensurable* with each other. Thus, the gallon (10 pounds avoirdupois of distilled water) equals 221.8192 cubic inches. Again, the linear unit, as everybody knows, is the natural connection between linear and surface measure. But the linear link (7.92 inches), the square of which is a unit of land measure, is neither a decimal, nor yet an aliquot part of a linear foot or yard, consequently the square foot is incommensurable with the surveyor's unit of length and unit of surface.

2d. Some of its terms are employed in a *double sense*, and these meanings are all different from those in which they are now used.

3d. *Twenty-one* of its boasted familiar terms have *new significations*. They are wrested from that particular meaning which long established usage has assigned them, and are invested with a new and unfamiliar one.

The question here arises, how are we to know whether these 21 terms express the new or the old signification? And how is the pupil to decide upon the meaning of these ambiguous terms? It may well be doubted whether these old names with new significations, and double meanings, names which have no analogy to the thing signified, are not *more objectionable* than *new names* which are suggestive of the new ideas designed to be expressed.

In like manner it may be shown, that all attempts to ingraft upon our English nomenclature, commensurability of base and derivative units with the decimal notation, are attended with inherent, insurmountable difficulties, and are calculated to perpetuate the evils they profess to remedy.

#### The Metric System.

The other plan proposed to secure international uniformity of weights and measures, is the adoption of the *Metric System*.\* The Metric System receives its name from the *Meter*, its principal standard unit of length. The meter is a ten millionth part of the

\* The origin of the Metric System is due to France. In 1790, Talleyrand circulated among the members of the Constituent Assembly, a proposition to reform the heterogeneous system of weights and measures then in vogue, or rather to form a new one, founded upon the principle of a single and universal standard. The proposition, with some modifications, was adopted by the Assembly, and sanctioned by the king (Louis XVI), August 22, 1790. That the new system might obtain general favor, Great Britain and other nations were invited to unite with France in the formation of a joint commission to carry out this plan. Great Britain, it is deeply to be regretted, did not accept the invitation; but Spain, Denmark, Tuscany, Switzerland, etc., were represented in the convention, which embraced some of the most eminent mathematicians and scientists of Europe. By a decree of the assembly, a committee of five of the ablest members of the Academy of Sciences, Borda, Lagrange, Laplace, Condorcet and Monge, were appointed to select a natural standard for the unit of length, and the unit of weight in relation to that of length. Three objects presented themselves as suitable standards for the linear unit, viz.: a quarter of the terrestrial meridian, a quarter of the earth's equator, and the pendulum vibrating seconds. After careful consideration, the committee recommended the quadrant of the meridian as the standard of length, and a given quantity of water as that of weight. The measurement of the arc of a meridian, extending through France from Dunkirk to Barcelona, was entrusted to Mechain and Delambre, mathematicians of the highest eminence.

The determination of the unit of weight was assigned to Lefevre Gineau and Fabbroni, who decided that a kilogramme made of platinum, should represent a weight equal to the weight of a cubic decimeter of distilled water in a vacuum, at the level of the sea, and at its maximum density. Water was chosen as the standard of weight, because universally distributed, and easily obtained pure in every part of the globe. The commissions charged with these important operations, commenced their labors, under the auspices of the government, March 31, 1791, but owing to political troubles, it was not until the 22d of June, 1792, that the *meter* and *kilogramme* were finally determined as units of length and weight.



distance from the equator to the pole, and is equal to 39.37 inches nearly. From the meter, or *unit of length*, are derived the unit of *surface*, called the *are*, the unit of *capacity* called the *liter* and the unit of weight called the *gram*.

The several ascending and descending orders are *decimal multiples* and *submultiples* of these units, and therefore, increase and decrease regularly by the scale of 10.

The names of the higher denominations are formed by prefixing to the several units, the Greek numerals *deka*, *hecto*, *kilo* and *myria*, which respectively denote 10, 100, 1,000, and 10,000; as, dekameter, hecto-meter, kilo-meter, myria-meter. Those of the *lower* denominations are formed by prefixing to the same units, the Latin numerals *deci*, *centi*, and *milli*, which denote  $\frac{1}{10}$ ,  $\frac{1}{100}$ ,  $\frac{1}{1000}$ ; as decimeter, centimeter, millimeter.

#### Objections to the Metric System.

We are first met by the objection of Sir John Herschell, that the quadrant of a meridian is not the best possible standard, that the earth's equatorial diameter, or polar axis, or "the length of a pendulum vibrating seconds under certain definite and normal circumstances," would be preferable. It is also added that "all meridians are not of the same length; and that the meter is not exactly the ten-millionth part of the distance from the equator to the pole," etc. Without stopping to inquire whether the objection of the learned astronomer may not justly be regarded as hypercritical; waiving also the assertion that all meridians are not of the same length, and that the meter was inaccurately determined, points which President Barnard shows have not yet been proved, it is sufficient for our present purpose to say, that if all that is claimed on these points be true, this would not detract essentially from the value of the Metric System. For, it should be observed, the *meter* is no longer an *abstract idea*, or a *mathematical conception*. It is a definite length—the length of a material object. It consists of a bar of platinum deposited in the archives of France, and is therefore a *concrete unit*. In this respect it is on equal footing with the present standard yard of the English system. It is exactly copied in measures within the reach of every branch of industry, and from its wide diffusion among the nations may readily become a *universal* standard.

Again, it is objected by our opponents, that the introduction of the system would cause certain manufacturing establishments great inconvenience and expense in changing their patterns and machinery.

In support of this objection, they quote largely from the speech of the Hon. Mr. Stephenson before the British Parliament, who enumerates among the sufferers, coopers, sawyers, manufacturers of hinges, bolts, screws, etc. "If the pound is abolished," he asks, "how can the candle-maker know how to make his 4's, 6's and 8's to a pound; and how will the housewife know whether her 6 candles weigh a pound?" To cap the climax, the honorable member indulges his grief over the anticipated abolishment of the milestones on the highways. "Are these to be shifted," he asks, "and are parliamentary trains, at a penny a mile, no longer to be heard of?" This was too touching! What wonder that Parliament straightway voted down the obnoxious reform! The disinterestedness of this objection reminds us of a whaling merchant who opposed free schools, on the ground that "if we educate our boys, they will no longer go before the mast; and who," he asks, "will man our whale ships? The introduction of free schools," exclaimed the deluded man, "will destroy the whale fishery and beggar our families!"

With regard to the manufacturers of hinges, etc., whether in Manchester, Eng., or Waterbury, Conn., we can only say that improvement is the order of the day; these varying patterns are the footprints in its march; and if the present owners of these establishments adhere to the styles now in vogue for ten years, the tyrant fashion will rule both them and their goods out of market. But suppose the introduction of the Metric System should cause manufacturers a temporary inconvenience and expense, shall the temporary interest of the few, with their annual dividends of twenty or thirty per cent, be allowed to override the welfare of the many, for all time?

Our opponents also object that the Metric System is inconvenient because it requires so many words or denominations to express ordinary quantities. In the next breath they tell us that, as a general rule, numbers are read in the lowest unit, which makes them too large for convenience.

These objections contradict each other, and therefore both cannot be tenable. Moreover, it requires but a slight glance at the system to see that neither is valid. What would be thought of the knowledge of an American who should read seventy-eight dollars sixty-two and a half cents, "as 7 eagles, 8 dollars, 6 dimes, 2 cents and 5 mills," or as 78,625 mills? Equally unnatural is it to read 78.625 meters, as 7 decimeters, 8 meters, 6 decimeters, 2 centimeters and 5 millimeters, or as 78,625 millimeters. Again, that troublesome lot of ground of 25 feet front by 100 deep, which it is said must be described as 7 meters, 6

decimeters and 2 centimeters front by 30 meters, 4 decimeters and 8 centimeters deep, is properly described as 7.62 meters front by 30.48 meters deep. And instead of expressing 150 miles, the reputed distance from Albany to New York, by 229,680 meters, or by 264,000 paces, it would naturally be expressed in round numbers, as 240 kilometers, the ordinary unit for long distances. It is unnecessary to say that a quantity expressed by the Metric System may be read in any single denomination which shall be chosen as the *unit*, the lower denominations always being *decimals* of that unit. The unit is chosen which is best adapted to the quantity desired to be expressed.

It is further asserted that the introduction of the Metric System "would change the records of our entire landed property." Do our learned colleagues mean by this that all our farmers would be obliged to have their deeds recorded again, in order to preserve a legal title to the property? *Ex post facto* laws, every school-boy knows, are unconstitutional. What effect the use of the Metric System can have upon the past records of our landed property we confess our inability to see. Every transfer of real estate requires a new record, but this record does not disturb the former. The validity of titles, the great landmarks of an estate or township, the directions of the boundary lines, etc., are no more affected by translating the dimensions from the given number of rods, feet and inches, "more or less," as formerly described, into meters and decimals of a meter, than if these dimensions were expressed in chains and decimals of a chain, according to present usage.

It is also urged that the introduction of the Metric System would *obliterate*, to a certain extent, all present knowledge; that as great confusion would follow as if we were forbidden to speak any language but the French. This argument assumes that the human intellect is so constituted that learning a new science necessarily crowds out an old one, and consigns it to oblivion. It implies that new ideas are necessarily hostile to old ones, and by reason of their incompatibility they cannot dwell together harmoniously in the same mind. Such objections are too frivolous to require refutation.

Finally, it is insinuated that the public mind will be influenced to oppose its use by the fact that the system comes from a foreign country. It is unnecessary to say that such insinuations do great injustice to the intelligence and scholarship of Americans. Why should a system of metrology, derived from a foreign land, be any more obnoxious to the American mind than a foreign system of Algebra, of Geometry, or the *Mecanique Celeste*?

## Claims of the Metric System.

Let us now turn our attention to some of the more prominent claims of the Metric System.

*First.* Its *base unit* is a common measure of all its *derivative* units. This, we have seen, is an indispensable characteristic of a system designed for universal adoption.

*Second.* It is constructed upon the principles of the *decimal* notation; its denominations, like those of our National currency, and the orders of simple numbers, increase and decrease regularly by the scale of *ten*.

But it is said that, however convenient the decimal scale may be for scientific calculations, for some practical purposes it is not so well adapted as the binary, and the adoption of the *half* meter, the *quarter* meter, etc., is an abandonment of the system. This assertion adroitly assumes that if we adopt a system, we are necessarily tied down to all its details, and if we vary them, if we add to or subtract from them, we *abandon* the system. But is this so?

In monetary affairs we employ the *half* dollar, the *quarter* dollar, etc., and yet who ever presumed to say that we have abandoned the Decimal Currency of our fathers?

The whole civilized world uses the *half*, the *third*, the *fourth*, etc., of a unit, yet who ever dreamed that the great principles of the Arabic notation are abandoned by so doing? No more can it be said that the use of the *half-meter*, *quarter-meter*, etc., in business matters, is an abandonment of the Metric System.

*Third.* The *Meter* or *linear unit*, we have seen, is based upon one of the invariable natural dimensions of the earth. It is also a *convenient, medium standard* of measurement. It is worthy of remark, that the length of the meter is practically identical with the arithmetical mean of the English and American standard yard, the archine of Russia, the old French ell, and the pendulum which vibrates seconds; the difference being less than  $\frac{17}{100}$  of an inch. Whatever may be the opinion of our opponents, taking the practical judgment of these enlightened nations, in connection with one of the elements of nature as our guide, we are warranted in saying, that the meter is a convenient medium standard of measurement.

*Fourth.* It commends itself by the *brevity* and *significance* of its nomenclature. And yet the majority of your committee complain that the terms are long and hard. That each word consists of two parts, a base and a prefix, etc. Let us analyze this point. Is a

science to be discarded because its technical terms are hard and long? If so, what will become of modern chemistry, mineralogy, botany, and the whole catalogue of natural sciences? And with what consistency can the advocates of a system embracing such terms as "avoirdupois weight, apothecaries' weight, hundred-weight, penny-weight, hogsheads, scruples," etc., complain of the hard and "long-worded language" of the Metric System? It is agreed by all parties that the technical terms of every science should be *simple, exact, comprehensive, and few* as possible.

Let us apply this test to the metric nomenclature. To designate the different denominations of distance, surface, capacity, and weight, the Metric System employs *twenty-eight* terms only. Of these terms, *seventeen*, like *eagles* and *dimes* in our decimal currency, are not used in business calculations. *Eleven words*, then, practically constitute its *whole vocabulary*. Of these *eleven terms*, the *four* base-units, the *meter, are, liter* and *gram*, are *primitive words*. The remaining *seven* are formed by prefixing to the base, certain *numeral adjectives*, four of which are Greek and three Latin.

Now we submit, whether a nomenclature can be found; nay, whether it is possible to conceive of one, by which the *weight and measurement* of all objects, from the *minutest animalcule* that floats in air, to the *mightiest globe* that revolves through space, can be expressed by so *few, simple, exact, and comprehensive* terms. Each denomination has a *distinct name*, and each name a *definite meaning*, "no two words express the same thing, and no two things are signified by the same word."

With respect, then, to simplicity, exactness, comprehensiveness, and fewness of terms, the *metric nomenclature*, we venture to affirm, stands unrivaled.

*Fifth.* The metric nomenclature has the further recommendation of being emphatically *cosmopolitan*. A terminology borrowed from a living language, can hardly fail to excite the prejudice of inferior nationalities, much more that of rivals and superiors. But the Metric denominations being derived from the classic languages of Greece and Rome, which have had such an important instrumentality in *molding* all modern tongues, and have so *greatly enriched* the science and literature of all modern nations, is *beyond the reach* of jealousy and criticism, and must readily secure *universal* favor.

*Sixth.* Another advantage of the Metric System is, that it is easily *learned*, easily *retained*, and easily *practiced*. Instead of requiring months and years to become familiar with a long catalogue of varying

scales, and the practical applications of terms of double and triple meaning, which are often forgotten in less time than is spent in memorizing them, the pupil has to learn only 11 words, 7 of which are suggestive of their exact signification, and the system is effectually and permanently mastered. Nay, more; as soon as the value of the *four* base-units are fixed in the mind, the values of all the derivative units, being formed by multiplying or dividing the base by 10, are at once apprehended. Its denominations are reduced from higher to lower, and from lower to higher terms, by simply removing the *decimal point* to the right or left, as in reducing our national currency to higher or lower denominations; and all its operations, in adding, subtracting, etc., are identical with those in simple numbers and decimals.

*Seventh.* The system has the *cordial support* of the great commercial, scientific, and educational interests of the age.

The International Statistical Congress, an institution inaugurated within the last twenty years, for the purpose of collecting the facts pertaining to the different exchangeable quantities of commerce, whether natural or industrial, at once felt the necessity of having a common standard of comparison and common terms of weights and measures in which to express the results of their inquiries in order to make them available. This learned body of political economists adopted the Metric System as the standard of comparison, and employ its terms in recording all statistical information respecting the objects of their researches.\*

The system was unanimously indorsed by the International Conference on Weights and Measures and Money, held at Paris, in 1867. At this conference twenty-two different nations were represented, among which were Great Britain, Russia, and the United States, and among its accredited delegates were Professors Leone Levi of London, De Jacobi, of St. Petersburg, F. A. P. Barnard of New York, and many of the most eminent mathematicians and scientists of the age.

Again, the British Association for the Advancement of Science, and the Imperial Academy of Sciences of St. Petersburg have repeatedly memorialized their respective governments in favor of its adoption.

In England its adoption has been asked by more than forty chambers of commerce and boards of trade, farmers' clubs and working-men's associations, and been advocated by such eminently scientific and practical men as Sir Wm. Armstrong, Sir Joseph Whitworth, and Sir Wm. Fairbairn.

\* Report of Hon. Samuel B. Ruggles.



In our own country its adoption has also been recommended by the National Academy of the United States, by the American Association for the Advancement of Science, by the National Teachers' Association, the American Institute of Instruction, the New York State Teachers' Association, etc., etc. On the other hand, it is believed that within the last twenty years not a single scientific association or journal in this or foreign lands, of respectable standing, has opposed its adoption. It remains for this Convocation, the highest educational representative body in the Empire State, to say whether it is prepared to be the first to put itself upon record in opposition to the system.

*Finally.* The Metric is the *most available* system of weights and measures that has any claim to universal adoption. The commercial and scientific movements of the nations that have recently been brought into juxtaposition by the electric wires, clearly indicate the certainty that a universal, international system of metrology must and will prevail. Its final triumph is a mere question of time. But we have already seen that the choice lies between the Metric and the English systems. Which of these systems then presents the most favorable prospects of success?

Scarcely seventy-five years have elapsed since the former was inaugurated. Its early history was surrounded by many of the most unpropitious circumstances. For years it was opposed by the combined influence of long established habits of ignorance, bigotry, political jealousy and hate; yet its simplicity and exactness have conquered the deep rooted prejudices of one people after another, till to-day it numbers among its followers twenty-one different countries, and is the only legal system of more than two-thirds of all civilized lands.\* Can any sane man therefore expect that all these peoples will be ready to abandon a system so highly satisfactory to them and adopt our English system, with which they are but slightly acquainted, and whose irregularities they instinctively dread? The action of the British Parliament and of our own Congress seem to have anticipated the answer. The former, in 1864, and the latter, in 1866, passed laws permitting the employment of the Metric System throughout their dominions,

\* The following countries have adopted the Metric System in full: France, the French colonies, Holland, the Dutch colonies, Belgium, Spain, the Spanish colonies, Portugal, Italy, Germany, Greece, Roumania, British India, Mexico, New Grenada, Ecuador, Peru, Brazil, Uruguay, Argentine Confederation, and Chili, the total population of which is 336,419,598. The following have adopted metric values, and may be considered as committed to its exclusive use in a few years: Wurtemberg, Bavaria, Baden, Hesse, Switzerland, Denmark, Austria and Turkey, whose population is 84,089,909. Add to these Great Britain and the United States, with a population of over 70,000,000, who may legally use it, and we have a grand total of more than 490,000,000.

with the evident expectation of its ultimate use. Indeed, it has already become the principal method used by the British and American analytic chemists and physicists in recording the results of their labors.

In view of these movements, every nation imbued with a spirit of liberality and a just regard for the good of the race, must *pause* before it opposes, on the narrow grounds of a personal preference for a *vernacular nomenclature*, a system which, confessedly, has all the fundamental elements of *usefulness*, and has already advanced so far in its career to *universal adoption*.

But here we are asked: "Is the introduction of the Metric System into our country a possibility?" "Can full-grown Americans be persuaded to *lay aside* their old tables and *learn* new ones?" "Will the minor tradesmen be induced to sell their wares by *meters, liters* and *grams*?" These questions neither surprise nor alarm us. They are evidently the *offshoots* of *self-interest*, or of the love of ease which too often springs up in the minds of men on the shady side of fifty.

#### Scientific Reforms of the Past.

Among human achievements during the past thousand years are three memorable reforms, which were as radical and difficult as the one now proposed. We allude to the Introduction of the Arabic Notation, the Reformation of the Calendar, and the Substitution in our own country of the Decimal for English Currency.

When the Arabic Notation was first brought to the doors of Europe, and asked for admission, the veteran conservatives and petty tradesmen of that age asked the same questions and interposed the same objections. Nevertheless, the *simplicity* and *comprehensiveness* of the system, without prestige, or royal patronage, or compulsory legislation, *swept* the cumbersome modes of calculation of previous ages into oblivion, and at length secured *universal use*.

So thought and talked most of the nations of Christendom, when Gregory XIII first proposed the reformation of the Calendar, which set forward the vernal equinox from the 11th to the 21st of March, and thereby changed all the social, ecclesiastical, political and scientific dates of more than twelve hundred years. The excitement was so intense when the new Calendar (new style) was adopted in England, in 1752, that the people ran after the carriages of the ministers and cried, "give us back our 11 days." Nevertheless, the importance to science, to social and religious institutions, of having *civil* dates coincide from age to age with the return of the several seasons of the year, won a favorable hearing for the new Calendar. At length, individual and



national prejudice being overcome, one country after another wheeled into the ranks of its supporters, until every Christian land save Russia, long since adopted it to the exclusion of the Julian method.

So, likewise, felt many of our revolutionary fathers, when, in 1786, the Congress of the United States adopted the Decimal System of Currency. Nevertheless, after a sharp and protracted conflict, we have lived to see the old *siapences* and *shillings* and *pistareens*, worn smooth by the *pinchings* of *avarice*, swept into the *orucible* and transformed into Decimal Currency. The superiority of the *Decimal* over the *old State currencies*, at length conquered ancestral prejudice, and trod under foot the selfishness of petty shopkeepers and money changers. The logic of these events is without a flaw. They clearly show the power of man to reform usages which have been intrenched behind the strongholds of prejudice for ages. The last of these reforms was achieved on American soil, and affords living proof that free-born Americans will be ready to lay aside a cumbersome, obnoxious system of metrology for a new and better one, as soon as they see that *interest* and *convenience* require the change.

#### How this Change is to be Effected.

The change from our own to the Metric System is doubtless to be accomplished, if accomplished at all, by the irresistible force of public opinion. But how is public opinion to be enlightened and concentrated upon this point? We answer by giving to the metric the same facilities for being understood and practiced that are accorded to our own system. But our colleagues say that "legislation *has* placed the Metric System, in all respects, on the same footing with our own," and admonish us that "this is all which its friends have a right to ask." It is true Congress, in 1866, passed a law permitting the Metric System to be used throughout the United States, but provided no means for disseminating a knowledge of it among the people.

The Sultan of Turkey has recently issued an edict permitting his subjects to embrace and practice the Christian religion throughout his dominions. By parity of reasoning, then, Christianity, "in all respects, is placed on the same footing with" Mohammedism throughout the Ottoman empire.

Let us see how the case stands. From time immemorial, the Moslem has been taught to love and obey the Koran; he inhaled its spirit upon his mother breast; his veneration for its principles has grown with his growth and strengthened with his strength. Around it cluster the influence of prestige, the traditions of many a hard fought battle in its defense, and the sacred memories of a long line

of ancestors, who sacrificed their lives in the propagation of its dogmas. At length the devotees of Mohammed are informed that the Bible presents a more excellent religion than the Koran, and the Sublime Porte grants them permission to adopt it. But as yet the masses know nothing of this new religion, except that it is a rival code of morals, which imposes upon them new doctrines and duties, the nature and extent of which they do not understand.

This is precisely the condition in which the Metric System is now placed in the United States. We ask, then, does the legal permission to use a system of metrology, of whose principles and application the people are ignorant, place that system in all respects on the same footing with one which for centuries has held a prominent place in every curriculum of study, and which every man, woman and child in the land, from the chief magistrate down to the humblest citizen, is compelled to use in procuring the daily necessities of life? Is it unreasonable, then, for the friends of metrological reform to ask that the *disadvantages*, not to say *disabilities*, under which the Metric System is now placed in this country, may be removed, and that all classes of the community may become sufficiently acquainted with the system to pronounce an intelligent judgment upon its merits?

But how are the people to be made acquainted with its principles and applications? We answer, *negatively*, not by simple legislation; not by the strong arm of power, “*vi et armis*,” nor yet by mere resolutions of distinguished scholars and learned societies. No human legislation nor arbitrary power can transform ignorance into knowledge, neither can individual or associated resolutions enlighten the public mind; consequently, however important all these instrumentalities may be in directing attention to the subject, they cannot remove the difficulties by which it is surrounded.

The *first* and most *important instrumentality* in removing these obstacles is the *school-room*. Let the system be introduced and carefully taught side by side with our own in all places of learning, from the primary school to the university, and the most formidable of the obstructions will at once be removed. We, therefore, most earnestly commend this step to school committees, to boards of education, to superintendents of public instruction, and to all corporate bodies whose province it is to direct the studies of children and youth.

Another important method of disseminating a knowledge of the system is, to discuss its claims in Lyceums, Atheneums, and other associations for mutual improvement.

In the next place, let all quantities of domestic and foreign goods,

upon which excise or import duties are levied, and all the legal weights of matter allowed to be transmitted through the Post-office Department, with all medical prescriptions and recipes of druggists, be expressed, both in the denominations of our own and the Metric System. Again, let all documents issued by the Bureau of Statistics, and the different State Departments which refer to exchangeable quantities, be expressed both in metric and English denominations.

Last, but not least, let the *co-operation of the press* be invoked by the friends of reform. In the dissemination of knowledge, and the formation of public opinion, the power of the press is proverbial, I had almost said *omnipotent*. This stupendous power, we need not say, is ever ready to lend its services to the advancement of knowledge and the cause of humanity.

Let all these forces be secured, and the difficulties which now surround the system will disappear, and the people be prepared to appreciate its merits. The favorable tide of public opinion, formed at the well springs of education, will soon roll through the land with irresistible force. Seeing its great *simplicity*, its *comprehensiveness*, and its *superiority* over the present cumbersome system, all classes of the business community will readily adopt it, and the change is peaceably consummated.

We have now glanced at the *leading features* of the two rival systems of weights and measures, and the means by which we expect to see the final triumph of the former over the latter. Viewed from this stand-point, it is not too much to say that the system we advocate possesses the essential elements of *simplicity*, *comprehensiveness*, and *universality*; that its general adoption would cause civilization and commerce, by a single leap, to *spring* forward half a *century*. If these views are correct, it follows that of all the great problems which now engross the attention of the world, few are more *important* and *far-reaching* than the *unification* of weights and measures. It is a problem in which every nation and class of society on the globe, from the rudest to the most refined, have a common interest, and are bound to contribute, according to their ability, to its solution.

Our country was the *first* to inaugurate a system of *decimal currency*, which won *general* admiration. Though we cannot be *first* in extending this principle to weights and measures, Heaven forbid that we should *oppose* its application to them. Such a course would argue demoralization of intellect, and bring lasting reproach upon our national character.

But we leave the subject with the guardians of science and those

who minister at the altars of education, with the fullest confidence that its intrinsic merits are destined to win for it universal favor. In the prophetic words of the venerated John Quincy Adams, "It man upon earth be an *improvable* being, if that universal peace which was the object of a Savior's mission, and which is the *desire* of the philosopher, the *longing* of the philanthropist, and the *trembling hope* of the Christian, is a blessing to which the futurity of mortal man has a *claim of more than mortal promise*, then this system of *common instruments* to accomplish all the changes of social and friendly commerce will furnish the *links* of sympathy between the inhabitants of the *most distant regions*; the *Meter* will *surround the globe* in use as well as in *multiplied extension*, and *one language* of *weights and measures* will be spoken from the *equator* to the *poles*."

In this cursory view of the subject, we have endeavored to show the importance of metrological reform, the defects of our own system, the advantages of the metric, and the means by which a universal system may be secured. The conclusions we have reached may be summed up in the following resolutions:

*Whereas*, The commercial, diplomatic, and scientific intercourse between different nations is widely extended and rapidly increasing; and whereas, international intercourse, heretofore seriously impeded by the irregularities and imperfections of our own and other systems of weights and measures, would be greatly facilitated by a common system, in which all quantities of exchangeable commodities, scientific experiments and statistical information might be expressed; therefore,

*Resolved*, That in the judgment of this convocation, effectual measures should at once be taken by the friends of commerce to establish a uniform system of metrology for the use of the civilized world.

*Resolved*, That in order to be acceptable to the great family of nations and fulfill the great objects of its mission, said system should be founded upon an invariable standard and the decimal notation, that its base-units and derivative-units should be commensurable with each other, and be expressed in simple, concise terms.

*And whereas*, The Metric System, by common admission, "combines these elements in a higher degree than any other system reached;" and whereas, this system has already been adopted by so many enlightened nations; therefore,

*Resolved*, That we earnestly recommend its substitution for our own system, as soon as the people can be prepared for the change.

*Resolved*, That the quickest and best way to familiarize the people with its principles and applications, is to teach them in all our public and private schools, and, in connection with the present system, to begin to practice them in ordinary traffic, in competitive examinations for the civil service, in the requirements for entering college, scientific schools, the naval and military academies, etc.

## ANNALS OF PUBLIC EDUCATION IN THE STATE OF NEW YORK.\*

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### LEGISLATIVE GRANTS AND FRANCHISES ENACTED FOR THE BENEFIT OF ACADEMIES.

The following is a summary of legislation from 1786 to 1873, for the pecuniary relief and benefit of academies :

#### GOSPEL, SCHOOL, AND LITERATURE LOTS.

1786. "*An ACT for the speedy Sale of the unappropriated Lands within this state, and for other purposes therein mentioned,*" constituted certain State officers "commissioners of the land office," under whose direction the Surveyor-General was to lay out the waste and unappropriated lands belonging to the State into townships of sixty-four thousand acres each (ten miles square), as nearly as might be, and these townships into lots of six hundred and forty acres each, and construct a map of the same ; and

"XI. That in every township so laid out, or to be laid out as aforesaid, the surveyor-general shall mark one lot on the map, *gospel and schools*, and one other lot, *for promoting literature*, which lots shall be as nearly central in every township as may be ; and the lots so marked shall not be sold, but the lot marked, *gospel and schools*, shall be reserved for and applied to promoting the gospel and a public school or schools in such township ; and the lot marked, *for promoting literature*, shall be reserved to the people of this State, to be hereafter applied by the legislature for promoting literature in this state." The Southern District of the State (New York, Kings, Queens, Suffolk and Westchester counties) was excluded from the provisions of this act. 1 *Greenleaf*, p. 280.

1790. "*An ACT for the further Encouragement of Literature,*" declares, by way of preamble, that "it is the duty of a free and enlightened people to patronize and promote science and literature, as the surest basis of their liberty, property and happiness ;" that the Regents of the University "have represented that Columbia College, as well as the respective academies incorporated by the said regents in pursuance of the trust reposed in them by the legislature,

\* Entered according to act of Congress, in the year eighteen hundred and seventy-one, by DANIEL J. PRATT, in the office of the Librarian of Congress, at Washington.

require aid and encouragement to remove the impediments under which they labour, from a deficiency of their funds, notwithstanding the contributions of individuals"; and that it appears "to this legislature, that a proportion of the public property will be wisely and usefully employed in enabling the said regents to remove those disadvantages, and to proceed with greater energy and success in accomplishing the important office assigned to them by law, as the guardians of the education of the youth of this state."

The said act therefore authorizes the Regents to take possession of and lease out certain described lands and tenements vested in the people of this State, and to apply the rents and profits thereof "for the better advancement of science and literature in the said college, and the respective academies now incorporated or hereafter to be incorporated under their superintendence and authority within this state, and in such manner and proportion as they shall conceive will best answer the ends of their institution and the true intent and meaning of this act: Reserving so much of the said rents, issues and profits as shall be found necessary to defray the expense which shall be incurred by them in the execution of their trust."

The same act further declared that, in addition to the provision which may arise from the rents and profits of such lands, a sum of money should be applied without delay for the same object, and actually appropriated the sum of one thousand pounds to Columbia College, out of any unappropriated money in the treasury. 2 *Greenleaf*, p. 316.

1792. "*An ACT to Encourage Literature, by Donations to Columbia College, and to the several Academies in the State,*" on the ground that the college had sustained serious losses in consequence of the late war, and was unable to incur such further expenses as would render it more extensively useful without pecuniary aid from the Legislature, appropriated for various wants of the college, out of any unappropriated moneys in or to be in the treasury after providing for certain specified objects, the aggregate sum of £7,900, and a further annuity of £750 for the term of five years; and a like annuity of £1,500 for five years, for the benefit of academies. 2 *Greenleaf*, p. 479.

### SPECIAL LEGISLATION.

The earliest special legislation in favor of academies, during the period under consideration, seems to have been in behalf of

#### JOHNSTOWN ACADEMY.

1796. "*An ACT relative to certain confiscated Lands in the counties of Saratoga and Montgomery,*" provided: "That all the estate,



right, title, interest, claim and demand of the people of the state of New York in and to lot number thirty-six in the village of Johnstown in the county of Montgomery, consisting of half an acre heretofore by law appropriated to and set apart for the use of a school,\* be and the same is hereby vested in the trustees of Johnstown academy and their successors in trust for the only benefit and advantage of the said academy." The trustees of the academy were further authorized by the same act, to sell said lot and to buy another for the same purpose, if deemed advantageous. 3 *Greenleaf*, p. 327.

Thirty years later, a sum of money was appropriated to this academy:

1826. "AN ACT *for the Relief of Johnstown Academy. Be it enacted,*" etc., "That the treasurer shall pay, on the warrant of the comptroller, to the trustees of Johnstown academy, the sum of sixteen hundred dollars: *Provided,* That before the receiving the said sum, the trustees shall give security, satisfactory to the comptroller, for the faithful application of said sum to the erection of a suitable building for the said academy, or to the repair of the present building, and to the purchase of a library and chemical apparatus, and that they will duly account for the expenditure thereof to the regents of the university." *Statutes*, p. 90.

1827. "AN ACT *to amend*" the foregoing act of 1826, authorized the investment of any unexpended balance of the appropriation, and the application of the annual interest thereof to the payment of teachers, or the purchase of a library or chemical apparatus, at the pleasure of the trustees. *Statutes*, p. 205.

#### OXFORD ACADEMY.

1800. "*An ACT relative to Oxford Academy,*" on the representation of the Regents of the University "that Oxford Academy has been accidentally consumed by fire, and that in their opinion legislative aid would be proper for the purpose of re-building said academy," authorizes the trustees to select one of the lots reserved for promoting literature in this State, and directs the commissioners of the land office to grant "letters patent" for the same. *Statutes*, p. 237.

1821. Section VIII of "AN ACT *to divide the town of Windsor,*" etc., appropriates "the annual income arising from the sale of the literature lot in the township of Fayette, in the county of Chenango,

\* "Sir Wm. Johnson set apart a portion of the Kingsborough patent for the benefit of a free school. This reservation was respected by the courts of forfeiture, and trustees were appointed to take charge of the trust. The proceeds were appropriated to the use of this [Johnstown] Academy." *French's Gazetteer of the State of New York* (1860), p. 817; *Hough's Gazetteer* (1872), p. 812.



to the trustees of Oxford academy, for the use and benefit of said academy." *Statutes*, p. 239.

1822. The bonds and moneys received from the sale of lot No. 51, in the township of Fayette, were granted to the trustees of Oxford Academy, the principal of which was to be invested for the use and benefit of said academy. *Statutes*, p. 4.

1868. "AN ACT for the relief of the Oxford Academy," authorizes and directs the trustees of the village of Oxford to levy and collect, out of the taxable property of said village, one thousand and five hundred dollars, to pay up the indebtedness of said academy and for the improvement of the academic property. *Statutes*, p. 823.

**"LITERATURE LOTTERIES, ETC., FOR THE JOINT BENEFIT OF ACADEMIES  
AND COMMON SCHOOLS."**

1801. "*An ACT for the encouragement of Literature*," provided that "there shall be raised, by four successive lotteries, the sum of one hundred thousand dollars, that is to say, the sum of twenty-five thousand dollars by each lottery," from the net avails of which the sum of twelve thousand five hundred dollars was to be paid to the Regents of the University, for distribution to academies, and the residue into the treasury of the State for the encouragement of common schools, in such manner as the Legislature should from time to time direct. *Statutes*, p. 158.

1814. The commissioners of the land office were directed "to sell and convey all the lands belonging to the people of this state, lying and being in the towns of Maryland and Milford, in the county of Otsego, and the sum or sums of money to be received therefor, to pay over in the following manner, the one moiety thereof to such academy or academies as the regents of the university shall or may direct, and the remaining half to the treasurer, for the benefit of common schools." *Statutes*, p. 95.

1816. "*An ACT for the sale of certain unappropriated lands in the county of Otsego*," provided for the sale of certain lands in said county, and the application of the proceeds, one-half to such academy or academies as the Regents of the University should direct, and the other half to the credit of the common school fund. The third section repealed the aforesaid act of 1813. *Statutes*, p. 86.

**CAYUGA ACADEMY.**

1806. By "*An ACT for the relief of the trustees of Cayuga Academy*," the commissioners of the land office were instructed to grant a certain 275 acres of land, in the township of Scipio, to the

trustees of said academy in fee simple, with the proviso that the said trustees pay the occupants of the land the value of the improvements made thereon. *Statutes*, p. 78.

1814. Lot No. 89, in the town of Oato, was granted to Cayuga Academy in the place of lot No. 36, in the town of Aurelius, which was previously granted to both Cayuga Academy and Union College, and which was held by the said college. *Statutes*, p. 79.

#### ORIGIN OF THE LITERATURE FUND.

1813. "*An ACT directing the sale of certain Lands for the benefit of Academies*," required the commissioners of the land office to sell, for the benefit of such academies, or to convey to such academy or academies as the Regents of the University shall direct, a certain tract of land in the town of Westford, in the county of Otsego. *Statutes*, p. 290.

1813. "*An ACT to authorize the sale of Lands appropriated for the promotion of Literature*," directed the commissioners of the land office "to cause all the land heretofore appropriated for the promotion of literature in this state, and situate in the military tract, or in either of the counties of Chenango or Broome, and now remaining unsold or not disposed of, to be surveyed and sold . . . . and to vest the proceeds in such manner as they may deem best calculated to secure the principal sum, and the regular payment of the interest thereon annually; and the Regents of the University shall make such distribution of the annual income amongst the several incorporated academies of this state as in their judgment shall be just and equitable, taking into calculation all former or present endowments made by the legislature of this state, except lot number twenty-four, in the town of Ulysses, in the county of Seneca, lot number thirty-six, in the town of Aurelius, in the county of Cayuga, and lot number eighty-five, in the town of Homer,\* in the county of Cortland, which lots are hereby appropriated to the support of academies in each of the said respective counties in which the said lots severally lie, to be regulated in such manner as the legislature shall hereafter direct." *Statutes*, p. 319.

#### POMPEY ACADEMY.

The same act provided that lot No. 15, in Camillus, Onondaga county, be granted to Pompey Academy in fee simple, and directed the trustees of said academy, "whenever they shall sell the said lot, or any part thereof, to loan the money arising from such sale on landed security to double the sum so loaned, and on the payment of any such loan, again to reloan the same forever, and appropriate the

\* 1822. The trustees of Cortland Academy were authorized to sell this lot and vest the proceeds for the benefit of their academy. *Statutes*, p. 8.

interest arising from such loans forever to the support and maintenance of instruction in said academy." *Statutes*, p. 319.

1814. The Supervisors of Seneca county were directed by law to take possession of lot No. 24, in the town of Ulysses, and to lease the same for the term of five years, for the support of academies in the said county, in such manner as the legislature should thereafter direct. *Statutes*, p. 74.

#### ERASMUS HALL ACADEMY.

1814. "*An ACT relative to Erasmus Hall*" provided, that "whereas, difficulties exist respecting the distribution of the school money in the town of Flatbush, in Kings county: therefore, . . . the school money granted from time to time to that part of the town of Flatbush, . . . commonly called the Old Town, . . . be paid . . . to the trustees of the academy of Erasmus Hall, . . . to be applied to the education of . . . poor children belonging to the said old town, and sent to the said academy, and who in the opinion of the said trustees shall be entitled to gratuitous education."

This act further provided that the trustees of said academy should account to the school commissioners of the town for the faithful application of the money, and report annually as to the number and progress of the children so instructed. *Statutes*, p. 91; *do.* 1827, 50th sess., p. 336.

#### ONONDAGA ACADEMY.

1814. "*An ACT for the Payment of certain Officers of Government and for other purposes*," granted lot No. 9, less fifty acres, in the town of Lysander, Onondaga county, to the trustees of Onondaga Academy in fee simple. *Statutes*, p. 253.

1825. "*AN ACT for the relief of the Trustees of the Onondaga Academy*," granted lot No. 100 in the town of Lysander, less fifty acres, to the said trustees in fee simple, and directed that an appraisal of lots Nos. 9 and 100 be made, and that the amount of the appraised value of lot No. 100, in excess of the value of No. 9, be paid to the said trustees on the warrant of the comptroller; the interest arising therefrom to be applied for defraying the expenses of instruction, and for no other purpose whatever. *Statutes*, p. 353.

Chapter 429 of the Laws of 1859 (p. 972) provided that this fund might be applied to payment of debt on new building.

#### ST. LAWRENCE ACADEMY.

1816. The commissioners of the land office were directed to issue letters patent conveying lot No. 56, in the town of Potsdam, to the

trustees of St. Lawrence Academy, in fee simple, with the proviso that no lease of said lot shall be for a term of more than thirty-one years, and that the avails "be appropriated for the payment of wages of the tutors in the said academy and for no other purpose." *Statutes*, p. 161.

1825. "AN ACT *for the relief of the Trustees of the St. Lawrence Academy*" authorized the commissioners of the land office "to sell, on the usual terms of selling public lands, such lot or lots reserved for literary purposes, and not otherwise appropriated to the literature fund, or otherwise, as may be sufficient to raise the sum of twenty-five hundred dollars, and to pay the same to the trustees of the St. Lawrence academy, for the use of that institution: *Provided*, That the comptroller, before drawing his warrant for the payment of such money, shall be satisfied that the said trustees of the said academy shall have erected and completed, on ground owned by them in fee, and free from incumbrance, a substantial brick or stone building for an academy, of the value of at least three thousand dollars." *Statutes*, p. 170.

1825. The commissioners of highways of the town of Potsdam were authorized to convey part of the public square to the trustees of St. Lawrence Academy. *Statutes*, p. 383.

1826. "AN ACT *to carry into effect the Provisions of an act for the Relief of the Trustees of St. Lawrence Academy, passed April 9, 1825,*" directs that "there shall be paid by the treasurer, on the warrant of the comptroller, to said trustees or their treasurer, the sum of twenty-five hundred dollars for the use of said institution, which said sum of money is hereby declared to be an advance for and in lieu of the sum of twenty-five hundred dollars, mentioned in the act, entitled [as above described], and the said sum directed to be raised by the act last mentioned, shall be raised in the manner therein mentioned, or in such other manner as the legislature shall hereafter prescribe, and become a part of the general fund of the state, as a reimbursement for the sum by this act authorised to be paid to the said trustees or their treasurer: *Provided however*, . . . that the said trustees shall repay to the people of this state, such part of the said twenty-five hundred dollars as the said fund shall not be sufficient to repay, together with lawful interest from the time the said trustees shall receive the same." *Statutes*, p. 82.

1828. "The Trustees of St. Lawrence academy are hereby authorised to sell, in whole or in part, and convey in fee simple or otherwise, the lot of land granted by the act hereby amended [that of 1816, above referred to], and to invest the avails of said land in a permanent fund, the annual income of which shall be appropriated for the payment of the wages of the tutors in the said academy, and for no other purpose." *Statutes*, p. 208.

1841. The Comptroller was authorized to loan to the Trustees of the St. Lawrence Academy, two thousand dollars out of the capital

of the common school fund, for a term of ten years, at seven per cent, on a mortgage of academic property, and an insurance policy as collateral security. Any unpaid interest might be deducted from the distributive share of the literature fund. *Statutes*, p. 63.

1849. "AN ACT *appropriating the revenues of the Literature and United States deposit fund*," contains the following, among other appropriations to colleges and academies: "To the St. Lawrence Academy, two thousand dollars." *Statutes*, p. 433.

1851. "AN ACT *making an appropriation for the St. Lawrence Academy, discharging a mortgage upon its academy buildings held by this state, on which is due an arrearage of interest*," appropriates out of any moneys not otherwise appropriated "four hundred and seventy-three dollars and nineteen cents, . . . in full satisfaction and discharge of a mortgage held by the state upon the academy buildings of the St. Lawrence Academy, and belonging to the common school fund, which moneys hereby appropriated shall be paid into the common school fund." *Statutes*, p. 967.

1857. "AN ACT *for the relief of the St. Lawrence Academy*."

\* \* \* \* \*

"The board of supervisors of the county of St. Lawrence are hereby authorised and required at their next annual meeting, to cause to be raised, levied, and collected by tax upon the inhabitants of the town of Potsdam, in said county, in the same manner in which the other taxes of the said town shall be raised and collected, the sum of fifteen hundred dollars, and when collected, to be paid over to the treasurer of St. Lawrence academy, for the use of said institution, for refitting and improving the buildings and premises of said academy." *Statutes*, p. 20.

#### STATUTES INCORPORATING ACADEMIES.

1817. The first legislative act incorporating an academical institution, viz., the Clinton Grammar School, was passed March 28, 1817; prior to which time the Regents of the University had incorporated forty academies, under the authority vested in that Board by the Legislature.

The following copy of the act above referred to will serve as a specimen of numerous statutes subsequently enacted for similar purposes :

#### CLINTON GRAMMAR SCHOOL.

1817. "AN ACT *to incorporate the Clinton grammar school*."

"WHEREAS Salmon Butler and others have, by their petition, represented to the legislature, that they have associated together and erected a building in the town of Paris and county of Oneida, for the use of a grammar school, and have prayed for an act of incorporation—Therefore,

I. *BE it enacted* [etc.], That Asahel S. Norton, Joel Bristol, Jesse Curtis, Seth Hastings, junior, and Isaac Williams, and their successors in office, be and they are hereby constituted and declared to be a body politic and corporate, in fact and in name, by the name of the trustees of the Clinton grammar school, and by that name they and their successors shall and may forever hereafter have continual succession, and be capable in law of suing and being sued, impleading and being impleaded, answering and being answered unto, defending and being defended, in all courts and places whatsoever, in all manner of actions, suits and causes whatsoever; and may have a common seal, and change the same at pleasure; and may hold, receive, purchase, have and possess real and personal estate, and at pleasure sell and dispose of the same, for the sole and only use of the said grammar school.

II. *And be it further enacted*, That there shall be five trustees to manage the concerns of said corporation, any three of whom shall be a quorum for the transaction of business; and that the five persons last aforesaid named, shall continue trustees until others are chosen in their stead; and that when any vacancy or vacancies shall happen in the office of trustees, by death, resignation or removal from the town of Paris aforesaid, such vacancy or vacancies shall be supplied by appointment of some person or persons residing in said town, under the hands of the remaining trustees and their corporate seal.

III. *And be it further enacted*, That the said trustees and their successors shall have power to appoint such and so many officers, instructors and agents, as they, or a majority of them, may think proper, for the conducting and managing the school, property and concerns of the said corporation, and to make all such by-laws, rules and regulations as they or a majority of them may think proper for the well ordering of the same, and for the election of trustees, by the persons who have contributed, or may contribute, towards the funds and property of said corporation: *Provided however*, That such by-laws, rules and regulations, shall not be inconsistent with the intent of this act, the constitution and laws of this state or of the United States: *And provided further*, That the legislature may, at any time, add to, alter and amend the provisions of this act." *Statutes*, p. 110.

"AN ACT to incorporate the members of the New York Institution for the Instruction of the Deaf and Dumb," passed April 15, 1817, concludes with this section:

"VI. *And be it further enacted*, That this act be and is hereby declared a public act, and that the same be construed in all courts and places benignly and favorably, for every humane and benevolent purpose. *Statutes*, p. 306.

1819. "AN ACT to incorporate a Female Academy in the village of Waterford," includes the following section:

"VII. *And be it further enacted*, That this act shall be and is hereby declared to be a public act, and shall be construed benignly and favorably for every beneficial purpose hereby intended, nor shall



any non user of the privileges granted hereby to the said corporation create or produce any forfeiture of the same, and no misnomer of the said corporation,\* in any deed, will or testament, grant, gift, demise, or other instrument, contract or conveyance, shall defeat or vitiate the same: *Provided* the corporation be sufficiently described to ascertain the intention of the parties. *Statutes*, p. 61.

From the years 1819 to 1830 inclusive, forty-one Academies and similar institutions of learning were incorporated by the Legislature, and twenty-eight of these acts of incorporation are expressly declared to be public acts, generally in the precise language of the section last quoted above. The names of these twenty-nine institutions are:

- 1819. WATERFORD FEMALE ACADEMY.
- 1820. CATSKILL FEMALE SEMINARY. *Statutes*, p. 87.
- 1820. MOUNT PLEASANT ACADEMY. *Statutes*, p. 90.
- 1821. ALBANY FEMALE ACADEMY. *Statutes*, p. 43.
- 1822. NEWTOWN FEMALE ACADEMY. *Statutes*, p. 59.
- 1822. COOPERSTOWN FEMALE ACADEMY. *Statutes*, p. 178.
- 1823. ITHACA ACADEMY. *Statutes*, p. 93.
- 1823. REDHOOK ACADEMY. *Statutes*, p. 413.
- 1824. KINDERHOOK ACADEMY. *Statutes*, p. 169.
- 1824. JEFFERSON ACADEMY. *Statutes*, p. 378.
- 1825. SEMINARY OF THE GENESEE CONFERENCE (since ONEIDA CONFERENCE, and now CENTRAL N. Y. CONFERENCE SEMINARY). *Statutes*, p. 125.
- 1825. ONTARIO FEMALE SEMINARY. *Statutes*, p. 239.
- 1826. BRIDGEWATER ACADEMY. *Statutes*, p. 96.
- 1826. BEDFORD ACADEMY. *Statutes*, p. 101.
- 1826. CANAJOHARIE ACADEMY. *Statutes*, p. 155.
- 1826. RENSSELAER OSWEGO (now MEXICO) ACADEMY. *Statutes*, p. 158.
- 1826. OVID ACADEMY. *Statutes*, p. 164.
- 1827. LIVINGSTON COUNTY HIGH SCHOOL (now GENESEO ACADEMY). *Statutes*, p. 50.
- 1827. SPRINGVILLE ACADEMY (now GRIFFITH INSTITUTE). *Statutes*, p. 66.
- 1827. GAINES ACADEMY. *Statutes*, p. 300.
- 1827. FLUSHING INSTITUTE. *Statutes*, p. 360.
- 1827. BUFFALO HIGH SCHOOL ASSOCIATION. *Statutes*, p. 369.
- 1828. ALBANY FEMALE SEMINARY. *Statutes*, p. 221.
- 1828. ROCHESTER INSTITUTE OF GENERAL EDUCATION. *Statutes*, p. 375.

\* So spelled in the Statute.

1828. WHITE PLAINS ACADEMY. *Statutes*, p. 377.

1829. PALMYRA HIGH SCHOOL. *Statutes*, p. 157.

1829. BROOKLYN COLLEGIATE INSTITUTE FOR YOUNG LADIES. *Statutes*, p. 344.

1830. ONTARIO HIGH SCHOOL. *Statutes*, p. 119.

The Revised Statutes, which went into full effect in 1830, made general provisions applicable to all corporations, and a clause referring to these provisions occurs in many of the subsequent acts incorporating academies, seemingly in place of the disused section "That this act be and hereby is declared a public act," etc.; as above cited.

#### LOWVILLE ACADEMY.

1818. One of the lots, of 640 acres, reserved by law within the ten townships located on the St. Lawrence, was directed to be granted by letters patent to the trustees of Lowville Academy; and it was made the duty of the trustees to apply the interest arising from the sale thereof in the manner stated above with reference to Pompey Academy, in 1813, (investing the principal, and applying the income to the maintenance of instruction). *Statutes*, p. 123.

1824. "AN ACT *for the relief of the Trustees of the Lowville Academy*," authorized the commissioners of the land office to sell lots reserved for literary purposes "sufficient to raise the sum of three thousand dollars, and to pay the same to the Trustees of the Lowville academy, for the use of that institution: *Provided*, that the comptroller, before drawing his said warrant, shall be satisfied that the said trustees shall have erected and completed, on ground owned by them in fee and free of incumbrance, a substantial brick or stone building for an academy, of the value of at least eight thousand dollars." (This provision was also enacted a year later, in the case of the St. Lawrence Academy, above cited, p. 687.) *Statutes*, p. 336.

1828. "AN ACT *for the relief of Lowville Academy*," authorized the trustees "to apply the whole avails of lot number fifty-six, in the town of Canton, in the county of St. Lawrence, to the payment of the debts owing by them, and which were contracted by them for the erection and completion of their academic buildings, notwithstanding any condition in the act granting the aforesaid lot to the use of the said academy." *Statutes*, p. 43.

1836. "AN ACT *to provide for the rebuilding of the Lowville Academy*" directs that "the treasurer, on the warrant of the comptroller, shall, out of any money in the treasury belonging to the capital of the common school fund, pay the sum of two thousand dollars to the trustees of the Lowville academy, in the town of Lowville, in the county of Lewis, to be by them expended in the rebuilding of the



principal building belonging to said academy; which said sum of two thousand dollars shall be charged in the books of the comptroller as a debt due from the said town of Lowville to this state, with interest thereon at the rate of six per cent per annum; and the said debt shall belong to the common school fund."

The act further authorizes and requires the supervisors of Lewis county, at their annual meeting in each year, for five years, "to cause to be levied and collected from the taxable inhabitants of the aforesaid town of Lowville, over and above all expenses of collecting the same, the sum of five hundred dollars, and the interest at the rate aforesaid, which may be due on the first day of February then next ensuing, upon so much of the principal sum of two thousand dollars as shall then remain unpaid; . . . and, when so collected, one hundred dollars thereof shall be paid to the trustees of the said Lowville academy, for the purposes aforesaid; and the residue thereof shall be paid over to the treasurer of the said county of Lewis," . . . who shall "pay the same into the treasury of this state; and, upon such payment being made, the same shall be an extinguishment of so much of the said debt so as aforesaid charged to the said town of Lowville." *Statutes*, p. 82.

1841. The provisions of the above act were extended as to time. *Statutes*, p. 249.

#### WASHINGTON ACADEMY.

1819. "AN ACT for the Relief of the Trustees of the Washington Academy." This act recites that "the trustees of Washington Academy, situate in the town of Salem, in the county of Washington, have sustained heavy losses, by having two edifices, together with the apparatus and libraries belonging thereto, destroyed by fire."

The act, therefore, appropriates to said trustees, "out of any moneys not otherwise appropriated, three thousand dollars, for the purpose of enabling them to rebuild said academy, and also to supply the same with suitable apparatus and library;" for the faithful discharge of which trust they are to account to the comptroller. *Statutes*, p. 62.

#### MONTGOMERY ACADEMY.

1819. "AN ACT to enable the trustees of the Montgomery Academy to erect a new building," granted to the trustees of Montgomery Academy the quit-rents, including the commutation for future quit-rents, on sundry patents containing an aggregate of 19,000 acres of land; but no direction is given in the body of the act as to the manner in which the proceeds are to be applied. *Statutes*, p. 149.

1822. "AN ACT for the relief of the Trustees of Montgomery Academy" appropriates \$737.82 to the trustees, in full satisfaction of

their claims (for quit-rents) under the above act of 1819. *Statutes*, p. 43.

1827. "The trustees of Montgomery Academy, in the town of Montgomery, and their successors in office, shall be the trustees of school district number seven in said town," \* \* *Statutes*, 50th sess., p. 336.

#### DELAWARE ACADEMY.

1819. "AN ACT concerning an Academy in the county of Delaware," provided that the sum of six thousand dollars, paid into the treasury of this State, from the proceeds of a tract of land forfeited by attainder, be appropriated to the Regents of the University, to be by them applied toward the endowment of an academy in the village of Delhi, Delaware county. *Statutes*, p. 218.

1821. The "Supply Bill" appropriated \$681, in lieu of quit-rents supposed to be due on the George Murray patent of 4,000 acres, "from which the said patent had been totally discharged by reason of a former confiscation and sale." *Statutes*, p. 266.

1849. "The treasurer shall pay, on the warrant of the comptroller,  
1. To the Delaware academy, for each of the years one thousand eight hundred and forty-nine and one thousand eight hundred and fifty, the sum of two hundred and eighty-nine dollars and fifty cents, being the interest, at six per centum, on four thousand, eight hundred and twenty-five dollars of state stock held by the comptroller, in trust for said academy, being part of an appropriation for said academy, by chapter one hundred and seventy, of the laws of one thousand eight hundred and nineteen." *Statutes*, p. 433.

1851. This provision was renewed for the years 1850 and 1851. *Statutes*, p. 992.

#### INCREASE OF THE LITERATURE AND COMMON SCHOOL FUNDS.\*

1819. "AN ACT concerning Quit-Rents, and to increase the Literature and School Funds, respectively," provided, "That one moiety of all the quit-rents, and commutation for future quit-rents, which may be received into the treasury, shall be and the same are hereby appropriated to the increase of the literature fund; and the other moiety thereof to the further increase of the school fund; . . . the one moiety thereof in the name of the regents of the university, to be held in trust by them for the promotion of literature; and the other moiety thereof in the name of the comptroller of this state, for the time being, to be held in trust by him for the benefit of the school fund; \* \* *Statutes*, p. 298.

\* For a report made by the Regents of the University, April 2, 1819, showing the funds and revenues of the Regents at that date, and the "fund for the promotion of literature" created by the Statute of 1812, see *Senate Journal*, 42d session, 1819, pp. 245-247.

1827. "AN ACT *to provide permanent funds for the annual appropriation to Common Schools, to increase the Literature Fund, and to Promote the Education of Teachers,*" directs, in regard to the increase of the Literature Fund, "that the comptroller be and he is hereby authorised to receive any bonds and mortgages taken, or that shall hereafter be taken, on the sale of any lands belonging to canal fund, to the amount of one hundred and fifty thousand dollars, in payment for so much of the canal stock owned by this state, belonging to the general fund, and thereupon to cancel and discharge the like amount of the said canal stock, and the bonds and mortgages when so received, and the sum of one hundred and fifty thousand dollars of the said canal stock, until the said bonds and mortgages are received, shall be appropriated and transferred to the literature fund of this state, and the income thereof shall be subject to the control of the regents of the university, upon condition or in addition to any other condition the regents may prescribe, that the said regents shall annually distribute the whole income arising from the fund now under their control, as well as that hereby added, among the incorporated academies and seminaries of this state, other than colleges, which are subject to the visitation of the said regents." \* \* \*  
 \* \* *Statutes*, p. 237.

1830, 1831, 1832. Certain transfers of stocks were directed to be made, not materially affecting the status of the Literature Fund. *Statutes*, 1830, p. 207; 1831, p. 350; 1832, p. 510.

1832. "AN ACT *for the improvement of the Literature Fund,*" directs that "the regents of the university shall, within sixty days after the passage of this act, transfer to the comptroller all the stock, money, securities and property belonging to the literature fund in their possession, or under their control;" and, further, provides for the application of the income arising from said fund to the same general purposes as before. *Statutes*, p. 10.

#### FARMERS' HALL ACADEMY.

1822. The Trustees of Farmers' Hall Academy, in the village of Goshen, were constituted the trustees of the common school district comprising the said village, provided, the consent of a majority of the taxable inhabitants of the district should be obtained, for the term of six years only, unless by renewal of such consent for the same period, from time to time. *Statutes*, p. 196.

#### OYSTER BAY ACADEMY.

1823. By a like provision of law, the trustees of Oyster Bay Academy were conditionally made the trustees of the local common school. *Statutes*, p. 170.

## MIDDLEBURY ACADEMY.

1823. The commissioners of the land office were authorized to raise one thousand dollars for the benefit of the Middlebury Academy, from the sale of lots reserved for literary purposes. *Statutes*, p. 45.

1826. The sum of \$1,000 was appropriated in advance for and in lieu of that provided for in 1823, the said trustees being required to give a penal bond to make up any deficiency in the amount raised by the sale of lots reserved for literary purposes. *Statutes*, p. 177.

## MOUNT PLEASANT ACADEMY.

1824. "AN ACT *for the benefit of the Mount Pleasant Academy*," directed the comptroller to grant to the trustees of said academy a certain bond and mortgage, with all the rights appertaining to the people of the State of New York thereto. *Statutes*, p. 330.

## RED HOOK ACADEMY.

1824. "AN ACT *making an appropriation for the Red Hook Academy*" granted \$1,000, to be raised from the sale of lots reserved for the literature fund, to the trustees of the Red Hook academy, for apparatus, library, etc.; for the faithful discharge of which trust, the said trustees were to account to the comptroller. *Statutes*, p. 375.

## FREDONIA ACADEMY.

1825. "AN ACT *for the Relief of Fredonia Academy*," granted an annuity of \$850 for five years, to be applied "towards the payment of a salary to a competent preceptor of said academy;" and provided "that the trustees shall annually report and account to the regents of the university for the application of the said monies." *Statutes*, p. 349.

## AUBURN ACADEMY.

1825. Letters patent were directed to be issued to the trustees of the Auburn Academy, for lot No. 88, less fifty acres, in the township of Sterling. *Statutes*, p. 387.

1826. The sum of \$1,002 was appropriated in exchange for the above lot. *Statutes*, p. 100.

## ITHACA ACADEMY.

1825. The treasurers of Seneca and Tompkins counties were authorized to sell lot No. 24, in the town of Ulysses, and apply one-half the proceeds to Ithaca Academy, and to preserve one-half for the benefit of such academy in Seneca county as the legislature should thereafter direct. *Statutes*, p. 428.

## LEWISTON ACADEMY.

1826. "AN ACT *relative to the Ferry on the Niagara River, at Lewiston,*" directed the commissioners of the land office to lease the said ferry and lot appertaining thereto, for a term of ten years, to the trustees of Lewiston Academy, for the sole use and benefit of said academy. *Statutes*, p. 301.

1833, 1843. The above lease was renewed for the term of ten years from each of the foregoing dates. *Statutes*, 1833, p. 114; 1843, p. 89.

## MEXICO (formerly RENSSELAER OSWEGO) ACADEMY.

1828. "AN ACT relative to the Rensselaer Oswego Academy," declares that "the site of the Rensselaer Oswego Academy is hereby located on a lot of land in the town of Mexico, in the county of Oswego, which was conveyed on the twentieth day of March, one thousand eight hundred and twenty-two, by Roswell L. Colt, to Dennis Peck, Leonard Ames, and William S. Fitch, trustees of school district number five, in said town of Mexico." *Statutes*, p. 124.

1829. "It shall and may be lawful for the trustees, for the time being, of school district number five, in the town of Mexico, in the county of Oswego, to convey by a good and sufficient deed of conveyance, to the trustees of the Rensselaer Oswego academy, or their successors in office, the land which was conveyed (as stated in the act of 1828), together with all and singular the buildings, appurtenances and privileges to the same belonging or in any wise appertaining." *Statutes*, p. 83.

1856. "AN ACT *authorizing the Comptroller to loan money to the Mexico Academy, and for other purposes,*" allowed the inhabitants of the town of Mexico, at a town meeting, to vote for or against the proposed loan; and in case of a majority vote in favor of such loan, "the comptroller is hereby authorized to loan to the trustees of the said Mexico academy, from the capital of the common school fund, a sum of money not to exceed the sum of one thousand five hundred dollars, to be paid in three annual installments, next following the making of such loan, with interest annually upon the whole sum remaining unpaid; and such loan, when made, shall be a debt of the said town of Mexico, to be assessed, levied and collected on the taxable property of said town, as hereinafter provided." \* \* \* *Statutes*, p. 171.

## FRANKLIN ACADEMY (Prattsburgh).

1828. "AN ACT for the Relief of Franklin Academy."

"The treasurer shall pay, on the warrant of the comptroller, to the trustees of the Franklin Academy, in the county of Steuben, the sum of two thousand dollars, out of the first money that shall be received into the treasury on account of the debt due the people of this state

from George McClure; the said sum to be applied by the said trustees to the purchase of philosophical apparatus, and a library suitable for the said academy; but this act shall not entitle the said trustees to any money out of the treasury, unless it shall be received from the debt above mentioned." *Statutes*, p. 298.

#### OGDENSBURGH ACADEMY.

1833. AN ACT *authorising the board of supervisors of the county of St. Lawrence to lay a tax on the town of Oswegatchie, to be invested in an academy and lot, and for other purposes,*" appoints "commissioners for expending and laying out the monies raised and appropriated by this act;" directs that "the money now in the hands of the supervisor and poor-masters of the town of Oswegatchie, or the securities therefor, shall be paid or delivered over into the hands of the [said] commissioners;" and provides for levying and collecting upon the taxable property of said town, such sum as, with the sum to be received from the said supervisor and poor-masters, shall amount to two thousand dollars: *Provided*, that the inhabitants of the village of Ogdensburgh shall first have raised, by subscription or otherwise, the sum of two thousand dollars for the same purpose. The said moneys are further directed to be applied to the purchase of a lot, and the purchase or erection of suitable buildings for an academy, etc., including a room for public meetings of the inhabitants; and certain town and village officers are made trustees, *ex officio*, of such academy. It is also directed, among other things, that the amount of said \$2,000 tax for each school district of the town be ascertained, and that the inhabitants of each school district of said town, outside of the village of Ogdensburgh, "shall annually be entitled to a credit on the tuition of any scholars from such district, attending any course of instruction in the said academy during the said year, to the amount of the interest on the sum so determined to have been paid or to belong to the said district." *Statutes*, p. 353.

1834. "AN ACT *in addition to an act entitled*" (as above), authorizes certain *ex officio* trustees of the Ogdensburgh Academy, for the term of ten years, to grant licenses to keep a ferry across the St. Lawrence river, the net rents, profits and income of which shall inure to and belong to the said Ogdensburgh Academy. *Statutes*, p. 220.

1844. The foregoing franchise was renewed for the term of ten years. *Statutes*, p. 53.

#### CANTON ACADEMY.

1835. "AN ACT *authorising the supervisors of the county of St. Lawrence to levy a tax for the benefit of a classical school in the*



*town of Canton, heretofore known as the Canton Academy,"* provided for raising the sum of five hundred dollars, to be securely invested, and the interest to be applied to the support of said classical school. *Statutes*, p. 282. ,

1837. Renewed, as to amount, for each of three successive years, provided an amount equal to the whole sum raised by taxation shall have been raised by individuals for the same object, or the income of such sum shall have been secured for a term of at least twenty years. *Statutes*, p. 139.

1842. The act of 1837 was amended and renewed so far as to allow the last five hundred dollars to be collected during two then subsequent years, and "to be applied in payment of debts incurred by Canton Academy, for the erection of academic buildings." *Statutes*, p. 367.

#### DISTRIBUTION OF THE LITERATURE FUND.

1834. "AN ACT *relating to the distribution and application of the revenues of the literature fund.*"

§ 1. There shall be twelve thousand dollars of the revenues of the literature fund annually distributed, by the regents of the university, to the academies and schools which now are or hereafter may be subject to the visitation of the regents, in the manner now provided by law; which moneys shall be exclusively appropriated and expended by the trustees of such academies and schools respectively, towards paying the salaries of tutors.

§ 2. Any portion of the excess of the literature fund over the sum of twelve thousand dollars, may, in the discretion of the regents, be assigned to any academy or school subject to their visitation, and subject to such rules and regulations as they may prescribe, for the purchase of text books, maps and globes, or philosophical or chemical apparatus; such sum shall not exceed two hundred and fifty dollars in any one year. But no part of the said excess shall be actually paid over, unless the trustees of the academy or school to which it is to be appropriated shall raise and apply an equal sum of money to the same object. *Statutes*, p. 176.

§ 3. The fifty-fourth section of chapter fifteen of title one of the first part of the Revised Statutes, is hereby repealed. [The section thus repealed was: "Any college or academy now incorporated, and exempt from the visitation of the regents, may subject itself to such visitation, by a resolution, to be approved and signed by a majority of its trustees, and attested by the seal of the corporation; and every such resolution, when received by the regents, shall be unalterable, unless with the consent of the regents." 1 R. S., p. 164.]

## EDUCATION OF COMMON SCHOOL TEACHERS.

1834. "AN ACT *concerning the Literature Fund*," directs:

§ 1. The revenue of the literature fund now in the treasury, and the excess of the annual revenue of said fund hereafter to be paid into the treasury, over the sum of twelve thousand dollars, or portions thereof, may be distributed by the regents of the university, if they shall deem it expedient, to the academies subject to their visitation, or a portion of them, to be expended as hereinafter mentioned.

§ 2. The trustees of academies to which any distribution of money shall be made by virtue of this act, shall cause the same to be expended in educating teachers of common schools, in such manner and under such regulations as said regents shall prescribe. *Statutes*, p. 425.

1849. "AN ACT *making appropriations for the support of common schools for the years 1849 and 1850*," provides, among other things:

§ 2. The treasurer shall pay on the warrant of the comptroller out of the income of the United States deposite or Literature Funds, not otherwise appropriated to the trustees of one or more academies, as the regents of the university shall designate, in each county in this state, the sum of two hundred and fifty dollars per year for the years one thousand eight hundred and fifty and one thousand eight hundred and fifty-one; provided such academy or academies shall have instructed in the science of common school teaching, for at least four months during each of said years at least twenty individuals, but no such one county shall receive a larger sum than two hundred and fifty dollars. *Statutes*, p. 236.

## FRANKLIN ACADEMY (Malone).

1836. "AN ACT *to provide for the rebuilding of the Franklin academy*," authorized the comptroller to loan out of the capital of the common school fund, "the sum of two thousand dollars to the trustees of the Franklin academy, in the town of Malone, in the county of Franklin, to be by them expended in the rebuilding of the academy buildings on the academy lot in said town; which said sum of two thousand dollars shall be charged in the books of the comptroller as a debt due from said town of Malone to this state, with interest thereon at the rate of six per cent per annum; and the said debt shall belong to the common school fund." To meet this indebtedness, the supervisors of said county were required to levy a tax, for each of four successive years, on the taxable inhabitants of said town of Malone, equal to one-fourth of the whole debt, including interest, etc. (See a similar act in relation to Lowville Academy, *ante*, p. 691.) *Statutes*, p. 32.

1857. "AN ACT to authorize a loan to the trustees of Franklin Academy, at Malone, Franklin county," authorized the comptroller to loan to said trustees, at seven per cent interest, "out of the capi-



tal of the common school fund, to be paid in six equal annual instalments, the sum of twelve hundred dollars, on the execution, by such trustees, of a bond and mortgage on their real property, as the comptroller shall deem ample security, or the deposit of such other security as the comptroller shall deem sufficient." A satisfactory policy of insurance on the academy buildings, duly assigned, was also required as further security. *Statutes*, vol. 2, p. 403.

#### SANDY HILL ACADEMY.

1836. "AN ACT *to provide for the building of an academy or high school in the village of Sandy Hill*," authorized the levying a tax upon the said village not exceeding three thousand dollars, for this purpose. *Statutes*, p. 790.

#### FURTHER INCREASE OF LITERATURE AND COMMON SCHOOL FUNDS, FROM THE U. S. DEPOSIT FUND.

1838. "AN ACT *to appropriate the income of the United States deposite fund to the purposes of education and the diffusion of knowledge*," directs that the sum of one hundred and ten thousand dollars be annually distributed from that fund to the common schools; the sum of fifty-five thousand dollars annually for the purchase of district libraries, for the term of three years, and thereafter for either libraries or teachers' wages, in the discretion of the inhabitants of each district; six thousand dollars each, annually, for five years, and until otherwise directed by law, to Geneva College, and the University of the City of New York, for the payment of professors and teachers; three thousand dollars annually for the same period and purpose, to Hamilton college; and twenty-eight thousand dollars annually "to the literature fund, which, together with the sum of twelve thousand dollars of the present literature fund, shall be annually distributed among the academies in the several senatorial districts by the regents of the university, in the manner now provided by law. But no academy shall hereafter be allowed to participate in the annual distribution of the literature fund, until the regents of the university shall be satisfied that a proper building has been erected and finished to furnish suitable and necessary accommodation for such school, and that such academy is furnished with a suitable library and philosophical apparatus, and that a proper preceptor has been and is employed for the instruction of the pupils at such academy:" And further, that the regents shall, on being satisfied that such building, library and apparatus are sufficient for the purposes intended, and that the whole is of the value at least of twenty-five hundred dollars, permit such academy or school to place itself under the visitation of the regents, and thereafter to share in the

distribution of the moneys above mentioned, or any other of the literature fund in the manner now provided by law. The regents of the university may also admit to such distribution and to any other of the literature fund, any incorporated school, or school founded and governed by any literary corporation other than theological or medical, in which the usual academic studies are pursued, and which shall have been in like manner subjected to their visitation, and would in all other respects, were it incorporated as an academy, be entitled to such distribution.

“§ 9. It shall be the duty of the regents of the university to require of every academy receiving a distributive share of public money under the preceding section equal to seven hundred dollars per annum, to establish and maintain in such academy a department for the instruction of common school teachers, under the direction of the said regents, as a condition of receiving the distributive share of every such academy.”

The residue of the income of the said U. S. deposit fund not otherwise appropriated was to be annually added to the capital of the common school fund. \* \* \* *Statutes*, p. 220.

1851. “AN ACT *appropriating the revenues of the Literature and United States Deposit Funds*,” provides :

§ 1. There shall be paid annually, by the treasurer, on the warrant of the comptroller, out of the revenues derived from the literature fund, to the several academies under the supervision of the regents of the university, the sum of twelve thousand dollars, and the further sum of twenty-eight thousand dollars from the income of the United States deposit fund, being in all forty thousand dollars, according to an apportionment to be made by the regents among the said academies, in proportion to the number of pupils in each who shall have pursued the requisite studies to enable them to share in said distribution; there shall be paid to the Delaware academy in each of the years 1851 and 1852, the sum of two hundred and eighty-nine dollars and fifty cents, being the interest at six per cent, on four thousand eight hundred and twenty-five dollars of state stock held by the comptroller in trust for said academy, being part of an appropriation for said academy, by chap. 170, of the laws of 1819. \* \* \*

§ 3. There shall be paid by the treasurer, on the warrant of the comptroller, out of the income of the literature fund, to the regents of the university, three thousand dollars annually, to be assigned by them to such academies, subject to their visitation, for the purchase of text books, maps and globes, or philosophical or chemical apparatus, as may apply for a part of the money for that purpose, on the terms prescribed in the second section of chapter one hundred and forty of the laws of one thousand eight hundred and thirty-four.

\* \* \* \* \*

§ 4. The treasurer shall pay yearly, on the warrant of the comptroller, out of the income of the United States deposit or literature

fund, not otherwise appropriated, to the trustees of one or more academies in each county of the state, as the regents of the university shall designate, the sum of twelve dollars and fifty cents for each scholar who shall have been instructed in such academy during at least four full calendar months in the science of common school teaching. *Statutes*, p. 992.

#### HUDSON ACADEMY.

1838. "AN ACT *for the relief of the Hudson Academy*," provides that "the comptroller of this State is hereby authorized to cancel the bond of five hundred dollars, with interest thereon, held by the people of this state, against the Hudson Academy, bearing date third March, one thousand eight hundred and thirteen." *Statutes*, p. 268.

#### PROVISIONS RELATIVE TO TRUST FUNDS.

1840. "AN ACT *authorizing certain trusts*," provides:

§ 1. Real and personal property may be granted and conveyed to any incorporated college or other literary incorporated institution in this state, to be held in trust for either of the following purposes:

1. To establish and maintain an observatory.
2. To found and maintain professorships and scholarships.
3. To provide and keep in repair a place for the burial of the dead; or
4. For any other specific purposes comprehended in the general objects authorized by their respective charters. The said trusts may be created, subject to such conditions and visitations as may be prescribed by the grantor or donor, and agreed to by said trustees; and all property which shall hereafter be granted to any incorporated college or other literary incorporated institution in trust for either of the aforesaid purposes, may be held by such college or institution upon such trusts, and subject to such conditions and visitations as may be prescribed and agreed to as aforesaid.

§ 2. Real and personal estate may be granted and conveyed to the corporation of any city or village of this state, to be held in trust for any purpose of education, or the diffusion of knowledge, or for the relief of distress, or for parks, gardens, or other ornamental grounds, or grounds for the purposes of military parades and exercise, or health and recreation, within or near such incorporated city or village, upon such conditions as may be prescribed by the grantor or donor, and agreed to by such corporation; and all real estate so granted or conveyed to such corporation, may be held by the same, subject to such conditions as may be prescribed and agreed to as aforesaid.

§ 3. Real and personal estate may be granted to commissioners of common schools of any town, and to trustees of any school district, in trust for the benefit of the common schools of such town, or for the benefit of the schools of such district.

§ 4. The trusts authorized by this act may continue for such time as may be necessary to accomplish the purposes for which they may be created. *Statutes*, p. 267.

1846. "AN ACT *to amend the act,*" (authorizing certain trusts as aforesaid) provides :

§ 1. The income arising from any réal or personal property granted or conveyed, devised or bequeathed in trust to any incorporated college or other incorporated literary institution, for any of the purposes specified in the "Act authorizing certain trusts," passed May 14th, 1840, or for the purpose of providing for the support of any teacher in a grammar school or institute, may be permitted to accumulate till the same shall amount to a sum sufficient, in the opinion of the regents of the university, to carry into effect either of the purposes aforesaid, designated in said trust. *Statutes*, p. 76.

#### CAMBRIDGE WASHINGTON ACADEMY.

1848. "AN ACT *for the relief and benefit of the Cambridge Washington Academy*" provides that "all the right, title and interest of the people of this state, in and to the personal estate of Margaret McLelland, deceased, late of Washington county, a lunatic, who it is alleged died without heirs at law capable of inheriting, is hereby released to the trustees of the Cambridge Washington Academy, for the use and benefit of said academy, provided always that nothing herein contained shall be construed to impair or affect the claims of any creditor or heir at law of said Margaret McLelland." *Statutes*, p. 341.

#### ACADEMY OF DUTCHESS COUNTY.

1849. "AN ACT *appropriating the revenues of the Literature and United States deposit fund,*" in addition to appropriations to certain colleges, and to the Delaware and St. Lawrence Academies, appropriates "to the Dutchess County Academy, out of the income of the United States deposit fund, four thousand dollars." *Statutes*, p. 433.

#### ALFRED ACADEMY.

1850. "AN ACT *authorizing a loan to the town of Alfred, in the county of Allegany, and to authorize the town of Alfred to reloan the same money to the trustees of Alfred Academy,*" provided for advancing the sum of ten thousand dollars from the capital of the common school fund, under certain specified conditions. *Statutes*, p. 496.

1851. The Annual Appropriation Act contains the following :

"From the General Fund:" [for the three next following institutions.]

## RENSSELAER INSTITUTE.

"For the Rensselaer Institute [then an academy], three thousand dollars." [Subsequent appropriations have been made to the Rensselaer Polytechnic Institute, which, being now authorized to confer degrees, may be classed with colleges.]

## GENESEO ACADEMY.

"For Geneseo academy, three thousand dollars."

## GOUVERNEUR WESLEYAN SEMINARY.

"To the Gouverneur Wesleyan seminary, two thousand dollars." *Statutes*, p. 936.

## NEW PALTZ ACADEMY.

1856. "AN ACT for the loaning of certain moneys to the New Paltz Academy, at New Paltz, Ulster county," provides:

§ 1. The comptroller is authorized to loan to the trustees of New Paltz Academy, the sum of one thousand dollars from the literature fund for the period of six years, upon said trustees filing satisfactory securities for the payment of the same by mortgage on the real estate belonging to said academy, situate in the village of New Paltz, Ulster county.

§ 2. The sum of money hereby authorized to be loaned shall be applied by such trustees solely for the benefit of such academy.

§ 3. The interest upon the sum hereby authorized to be loaned shall be paid annually. *Statutes*, p. 169.

1863. "AN ACT for the relief of New Paltz Academy," released the aforesaid loan of one thousand dollars with accrued interest, and appropriated from the general fund a sum sufficient to reimburse the literature fund therefor. *Statutes*, p. 826.

## LOANS TO ACADEMIES.

1857. During this year, the Legislature authorized the Comptroller to loan money from the common school fund to several of the academies, to wit:

ANTWERP LIBERAL LITERARY INSTITUTE, \$3,000. *Statutes*, vol. ii, p. 473.

FRANKLIN ACADEMY, Malone, \$1,500. Vol. ii, p. 403. (See p. 699, *ante*.)

ONONDAGA ACADEMY, \$4,000. Vol. ii, p. 496. (See p. 686, *ante*.)

OVID ACADEMY, \$5,000. Vol. ii, p. 492.

ROGERSVILLE UNION SEMINARY, \$3,500. Vol. i, p. 845.

SUSQUEHANNA SEMINARY, \$15,000. Vol. ii, p. 495.

## OLEAN ACADEMY.

1857. The town of Olean was authorized to raise \$1,500 by tax, on a two-thirds vote by the taxable inhabitants, the said sum to be expended in completing the said academy and buildings thereto belonging. *Statutes*, vol. i, p. 904.

## AURORA ACADEMY.

1864. The town of Aurora, Erie county, was authorized to raise six thousand dollars by bond, to be expended in rebuilding the said academy, and the Comptroller was authorized to make a loan from the common school fund on such bond. *Statutes*, p. 1318.

1868. Fifteen hundred dollars, in addition to the above, for completing and furnishing the building and paying off the indebtedness of said institution. *Statutes*, p. 533.

## UTICA ACADEMY.

1866. Common Council authorized to raise \$25,000 by bonds, to be applied to the erection of a new building, etc. *Statutes*, p. 26.

1868. Ten thousand dollars, in addition to the above. *Statutes*, p. 41.

## LE ROY ACADEMIC INSTITUTE.

1867. Town authorized, on a majority vote at the annual town meeting, to raise \$10,000, upon its bonds, for benefit of institute, the acting supervisor to be, after delivery of bonds, from that time forward, a trustee by virtue of his office. *Statutes*, p. 84.

## CANAJOHARIE ACADEMY.

1867. Village trustees authorized to levy tax of \$2,500, to pay indebtedness of said academy and to improve property. *Statutes*, p. 833.

## ARCADE ACADEMY.

1867. Town authorized to issue bonds to the amount of \$8,000, for liquidation of debt, erection of boarding-house, and improvement of buildings and grounds. *Statutes*, p. 2381.

## ALMOND ACADEMY.

1868. Town authorized, on a majority vote of electors, to raise \$7,000 by bonds, for erecting an Academy and town hall. *Statutes*, p. 199.

## WOODHULL ACADEMY.

1869. The Supervisor of Woodhull was authorized, on the consent of a majority of the tax-payers of said town, to issue bonds upon the credit of the town to the amount of \$4,000, for the purpose of erecting additional buildings for the use of said Academy. *Statutes*, p. 424.

## FRIENDSHIP ACADEMY.

1871. Supervisor of Friendship authorized, on a majority vote of electors, to issue bonds to the amount of \$3,000, for addition to building, repairs and improvements. *Statutes*, p. 269.

1873. Similar enactment for \$4,000 more. *Statutes*, p. 1181.

## CHRISTIAN BROTHERS' ACADEMY, ALBANY.

## CARY COLLEGIATE SEMINARY.

1871. "AN ACT making appropriations for certain public and charitable institutions," contains the following grants to academies, subject to the visitation of the Regents of the University:

"For the Christian Brothers' Academy at Albany, three thousand seven hundred and fifty dollars."

"For the Cary Collegiate Seminary, Oakfield, three thousand seven hundred and fifty dollars." *Statutes*, p. 1966.

## ROCHESTER FREE ACADEMY.

1872. The city was authorized to issue bonds to the amount of \$75,000, "to be expended in the erection of a free academy upon the site purchased and now owned by said city for such purpose." *Statutes*, p. 471.

Also, for \$15,000, to pay debt incurred in the purchase of a site for said free Academy. *Statutes*, p. 541.

1873. \$75,000 above, increased to \$125,000. *Statutes*, p. 1060.

## UNADILLA ACADEMY.

1872. "AN ACT to provide for the endowment of the Unadilla academy" authorizes an appropriation of \$10,000 of the surplus moneys in the hands of the railroad commissioners of said town, for which surplus money said town has incurred no liability, on the consent of a majority of the tax-payers of said town, owning or representing more than one-half of the taxable property, to be set apart as a fund, the income of which shall be applied exclusively toward the



payment of the salaries of teachers employed by the trustees of the said Unadilla Academy. *Statutes*, p. 1149.

#### CORTLAND ACADEMY.

1867. The town officers of Homer were authorized, on a two-thirds vote of electors, to raise \$20,000 by bond, for erection of new building for Cortland Academy. *Statutes*, p. 224.

1873. AN ACT to provide for the payment of tuition in Cortland Academy of academic scholars residing in the village of Homer."

SECTION 1. Every scholar residing within the corporate limits of the village of Homer, who has received or who may hereafter receive the regents' certificate, entitling such scholar to admission in the academies of this State, shall be entitled to tuition, free of charge, in Cortland Academy, in the village of Homer, for the full academic course of instruction as established by the trustees of said academy.

§ 2. To pay the expenses of tuition of all scholars who receive instruction in Cortland Academy pursuant to section one of this act, the trustees of the village of Homer are hereby authorized and required to levy a tax upon the taxable property of said village, sufficient to pay the tuition of such scholars, at the rate of nine dollars a term of thirteen weeks, for all scholars who are pursuing studies known as higher English, and at the rate of twelve dollars a term of thirteen weeks, for all scholars who are pursuing classical studies in said academy.

§ 3. After the close of each academic term in said academy, it shall be the duty of the principal of said academy to report, to the president of the board of trustees of said village, the name of each academic scholar residing in said village of Homer, who has received instruction in said academy during the previous term, with the number of weeks each has been in attendance, and the studies pursued by each, which report shall be verified by the affidavit of said principal.

§ 4. It shall be the duty of the president of the board of trustees of said village of Homer, within ten days after receiving the report mentioned in the preceding section, to lay the same before the board of trustees of said village, at a regular or special meeting of such board, whose duty it shall be to draw an order on the treasurer of said village, payable to the treasurer of said Cortland academy, for the amount which said academy is entitled to receive, as shown by the report of said principal of Cortland academy, which order shall be delivered to the treasurer of Cortland academy.

§ 5. It shall be the duty of the secretary of the board of trustees of said academy to give notice, in one or more papers published in the village of Homer, at least two weeks before the holding of the regents' examination in each term of said academy; and any scholar residing within the limits of said village shall be allowed all the privileges of an examination granted to scholars attending said academy.



§ 6. Nothing in this act, giving free tuition to scholars in Cortland academy, shall be construed so as to interfere with the discipline of said school; and it shall be lawful for the board of trustees of said academy, on recommendation of the principal of said academy, to expel any scholar for improper conduct.

§ 7. All acts and parts of acts inconsistent with this act are hereby repealed.

§ 8. The said board of trustees of the village of Homer shall take no steps in pursuance of the provisions of this act until the same shall be approved by a majority of voters of said village voting at a special meeting held for that purpose, in the town hall in the said village of Homer on the first Tuesday of May next. A notice of which special meeting shall be published in two papers published in said village for two weeks previous to such election. Said vote shall be taken by ballot, and there shall be written or printed or partly written and partly printed on the ballots of those in favor of the tax, "For the payment of tuition of academic scholars in Cortland academy;" and on the ballots of those opposed, "Against the payment of tuition of academic scholars in Cortland academy." The poll shall be open from one o'clock in the afternoon until seven o'clock in the evening. The trustees of said village shall preside at and certify the result of such meeting; and such certificate shall be recorded by the clerk of said village in the village record.

§ 9. This act shall take effect immediately. *Statutes*, p. 255.

#### STATE TAX FOR THE BENEFIT OF ACADEMIES AND ACADEMICAL DEPARTMENTS OF UNION SCHOOLS.

1872. The Annual Appropriation Act contains the following paragraph:

"For the benefit of the academies and academical departments of the union schools, the sum of one hundred and twenty-five thousand dollars, or so much thereof as may be derived from a tax of one-sixteenth of one mill upon each dollar of the taxable property of the State; the sum thus arising to be divided as the literature fund is now divided, which is hereby ordered to be levied for each and every year." *Statutes*, p. 1250.

1873. The Annual Appropriation Act renews the appropriation of 1872, with this modification of the clause following the word "State," to wit: "this sum to be divided as the literature fund is now divided, and in accordance with the law passed in eighteen hundred and seventy-two; but no part of this fund shall be distributed in aid of any religious or denominational academy of this State." *Statutes*, p. 1007.

The language used in the final clause of this paragraph differs from that which occurs in § 7, of the following statute:

## FREE INSTRUCTION, MODE OF DISTRIBUTION, ETC.

1873. "AN ACT in relation to academies and academical departments of union schools, and the distribution of public funds."

SECTION 1. The sum of one hundred and twenty-five thousand dollars, ordered by chapter five hundred and forty-one of the laws of eighteen hundred and seventy-two, to be levied for each and every year, for the benefit of academies and academical departments of union schools, shall be annually distributed by the regents of the university, for the purposes and in the manner following, that is to say:

§ 2. Three thousand dollars or so much thereof as may be required, in addition to the annual appropriation of three thousand dollars for the same purpose from the literature fund, for the purchase of books and apparatus, to be annually apportioned and paid in the manner now provided by law.

§ 3. Twelve thousand dollars, or so much thereof as may be required in addition to the annual appropriation of eighteen thousand dollars from the United States Deposit fund, for the instruction of common school teachers; the whole sum to be apportioned and paid to the several institutions which may give such instruction as now provided by law, at the rate of fifteen dollars for each scholar instructed in a course prescribed by the said regents, during a term of thirteen weeks, and at the same rate for not less than ten weeks or more than twenty weeks.

§ 4. The said regents shall cause to be admitted to the academic examination, established by them in the academies and academical departments of union schools, any common school, or free school, any scholar from any common school who may apply for such examination bearing the certificate of the principal teacher, or of any trustee of such school, that in his judgment such scholar is qualified to pass the said examination.

§ 5. Free instruction in the classics or the higher branches of English education, or both, shall be given in every academy and academical department of a union school subject to the visitation of the said regents, under such rules and regulations as the said regents may prescribe, to all scholars, in any academy and in any free school, or in any common school, who, on any examination held subsequent to the beginning of the present academic year, shall have received the certificate of academic scholarship issued by the said regents to the extent of twelve dollars, and if the condition of the fund will admit not less than twenty dollars tuition, at such rates of tuition as are usually charged for such scholars in such academies and academical departments respectively, and in case the tuition is free to resident pupils, at the rates charged to non-resident pupils, or at such rates, in all cases, as the said regents may deem reasonable; but such free instruction must be obtained by such scholars within two years from the date of their examination respectively.

§ 6. The said regents may, in their discretion and under such rules as they may adopt, annually apply a sum not exceeding twenty-five hundred dollars, in book or other premiums, for excellence in scholar-

ship and conduct, as shown in the papers and the returns of the academic examination; but the cost of any one premium shall not exceed ten dollars; and the said sum of twenty-five hundred dollars, or such part thereof as may be needed, shall be paid to the said regents out of the amount referred to in the first section of this act, by the treasurer on the warrant of the comptroller.

§ 7. The balance of the said one hundred and twenty-five thousand dollars remaining after the apportionments described in the preceding sections of this act shall have been made, shall be distributed as the literature fund is now by law directed to be distributed, but no money shall be paid to any school under the control of any religious or denominational sect or society.

§ 8. The said regents of the university are hereby authorized to make such just and equitable regulations as they may deem necessary for the purposes of this act.

§ 9. The treasurer shall pay, on the warrant of the comptroller, the several sums to which the said regents may certify any institution to be entitled under the provisions of this act.

§ 10. Every academy shall make up its annual report for its academic year, and shall transmit the same to the regents on or before the first day of September in each year.

§ 11. This act shall take effect immediately. *Statutes, p. 997.*

#### SUMMARY OF INSTITUTIONS AND LEADING SUBJECTS.

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# GERMAN

## IN THE COLLEGE CURRICULUM.

By ADOLPH WERNER,

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HAVING been desired to lay before the Convocation my views upon the study of German in our colleges, I beg to submit my examination-papers of the academic year just closed. These papers embody my opinion of what ought to be done, and can be done, in the way of German in an American college. I have stated upon each paper whether the students were allowed to consult the dictionary or not, and also whether the selections were from what they had read during the term or presented to them for the first time. No other explanations seem necessary.

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### THREE YEARS' COURSE.

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First Term, or 30 Lessons in all.

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#### EXAMINATION PAPER.

*February 2, 1872.*

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#### FRESHMAN CLASS.

##### 1. Translate (without dictionary):

*(Old matter—Glaubensklee's Reader.)*

Jetzt kam sie auf einen offenen Platz im Walde, da sah sie unter einem Baume ein Schneeglöckchen stehen, und weil sie von dem vielen Bücken und Laufen müde geworden war, setzte sie sich zu dem Glöckchen und legte ihr Reisigbündel neben sich. Als sie so dasaß und das Blümchen betrachtete, sagte sie: „Was für ein schönes, grünes Kleid du hast, liebes Schneeglöckchen, das pußt dich gar herrlich, und frieren wirst du auch nicht, wie ich armes Kind in meinem zerrissenen Kleide, und solch eine

schöne weiße Mütze, wie du hast, werde ich auch nimmermehr von der bösen Frau bekommen."

Der fremde Knabe trug ein silbernes Körbchen, und sprach mit einer holdseligen Stimme: „Komm, laß uns Beeren pflücken für deine kranke Mutter, sie wacht dort in dem Walde.“ Und Wilhelm ging mit dem fremden Knaben in den nahen Wald, und sie pflückten in kurzer Zeit das Körbchen voll der schönsten reifen Erdbeeren, obgleich es noch nicht Erdbeerzeit war; und der fremde Knabe ließ ihm das Körbchen und sprach: „Bringe diese Beeren deiner Mutter," und verschwand. Wilhelm nahm das Körbchen und brachte es seiner Mutter; sie aß von den Beeren und genas in derselben Stunde von ihrer Krankheit und herzte ihren Knaben.

In alten Zeiten wanderte einmal ein Riese auf der Landstraße. Da sprang ihm plötzlich ein unbekannter Mann entgegen, und rief: „Halt, keinen Schritt weiter!" „Was," sprach der Riese, „du willst mir den Weg vertreten? Wer bist du, daß du so lech mit mir redest?" „Ich bin der Tod," erwiderte der Andere, „mir widersteht Niemand, und auch du mußt meinen Befehlen gehorchen." Der Riese aber weigerte sich und fing an mit dem Tode zu ringen. Es war ein langer, heftiger Kampf, zuletzt aber behielt der Riese die Oberhand und schlug den Tod mit seiner Faust nieder, daß er neben einem Steine niederfiel. Der Riese ging seiner Wege, und der Tod lag besiegt da und war so kraftlos, daß er sich nicht wieder erheben konnte.

2. Give the case, gender, and nominative plural of *Platz*, *Wald*, *Baum*, *Kleid*, *Mütze*, *Frau*, *Knabe*, *Körbchen*, *Erdbeeren*, *Mutter*, *Mann*, *Hand*.

3. Give the infinitive and past participle of *wanderte*, *sprang*, *sprach*, *biß*, *redest*, *fing an*, *behielt*, *lag*.

4. Give the terminations of the present and preterit indicative, of both the strong and the weak verb.

5. Write the poem *Das Ständchen*.

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## Second Term, or 60 Lessons in all.

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*June 13th, 1878.*

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### FRESHMAN CLASS.

1. Translate (without dictionary):

(*Old matter—Glaubensklees's Reader.*)

Aber jetzt fiel es dem Großvezier ein, daß das Lachen während der Verhandlung verboten war. Er theilte seine Angst deswegen dem Kalifen mit. „Oß Reis und Medina! Das wäre ein schlechter Spaß, wenn ich ein Storch bleiben müßte! Besinne dich doch auf das dumme Wort, ich bringe es nicht heraus.“ „Dreimal!



müssen wir uns gen Osten bücken und dazu sprechen: Mu—Mu—Mu—." Sie stellten sich gegen Osten und bückten sich in einem fort, so daß ihre Schnäbel beinahe die Erde berührten. Aber, o Jammer! das Zauberwort war ihnen entfallen—und der arme Chasid und sein Begleiter waren und blieben Störche.

„Herr und Gebieter," flüsterte er leise, „wenn es nur nicht thöricht für einen Großvezier, noch mehr aber für einen Storch wäre, sich vor Gespenstern zu fürchten! Mir ist ganz unheimlich zu Muth, denn hier nebenan hat es ganz vernehmlich geknirscht und gestöhnt.“

Von der Lücke, an welcher sie standen, konnten sie einen großen Saal übersehen. Er war ringsum mit Säulen geschmückt und prachtvoll verziert. Viele farbige Lampen ersetzten das Licht des Tages. In der Mitte des Saales stand ein runder Tisch, mit vielen und ausgesuchten Speisen besetzt. Rings um den Tisch zog sich ein Sofa, auf welchem acht Männer saßen. In einem dieser Männer erkannten die Störche den Krämer wieder, welcher ihnen das Zauberpulver verkauft hatte. Sein Nebensitzer forderte ihn auf, seine neuesten Thaten zu erzählen. Er erzählte unter andern auch die Geschichte des Kalifen und seines Beziers. „Was für ein Wort hast du ihnen denn aufgegeben?" fragte ihn ein anderer Zauberer. „Ein recht schweres lateinisches, es heißt Mutabor.“

2. Explain the word *Doß*; give some analogous English (or French) words.

Give the two sets of German names of the four cardinal points of the compass.

What sort of box is called *Kasten*, and what *Doje*?

Distinguish *Pferd*, *Rosß* and *Gaul*.

Of what Roman name is *Kaiser* the German form?

What (about) was the duration of the German empire? from when to when?

3. Supply (in English) the principal clause to which the clause *wenn es nur . . . . . Gespenstern zu fürchten* is subordinate.

What is the subject of *ist in mir ist . . . . . zu Muth*?

In what order of arrangement is each clause of the sentence:

*Rings um den Tisch zog sich ein Sofa, auf welchem die Männer saßen. Why?*

Select from the third extract a clause (or simple sentence) in the order of arrangement not exemplified in the above sentence.

4. Translate *Mutabor* into German.

Give the second person singular of every tense of the indicative mood of *fallen*.

Give the nominative singular of *Schnäbel*, *Störche*, *Gespenstern*, *Lampen*, *Tages*, *Thaten*.



In the phrase ein runder Tisch mit Speisen besetzt, why is runder declined, and besetzt not declined?

Why is runder declined as it is?

5. Write the stanzas beginning severally:

1. Es ist nicht irdische Lust,
2. Führt sie nicht mit Wonne
3. Willst, feiner Knabe, du mit mir geh'n?
4. Kennst du das Haus? auf Säulen ruht sein Dach,
5. So will ich liegen und hórchen still,

Name the poems of which they are parts, and the poets.

### Third Term, or 103 Lessons in all.

*February 30, 1872.*

#### SOPHOMORE CLASS.

1. Translate (without dictionary):

*(New matter.)*

#### **Der kleine Hydriot.**

Ich war ein kleiner Knabe, stand fest kaum auf dem Bein,  
 Da nahm mich schon mein Vater mit in das Meer hinein,  
 Und lehrte leicht mich schwimmen an seiner sichern Hand  
 Und in die Fluthen tauchen bis nieder auf den Sand.  
 Ein Silberstückchen warf er dreimal in's Meer hinab,  
 Und dreimal muß' ich's holen, eh' er's zum Lohn mir gab.  
 Dann reicht' er mir ein Ruder, hieß in ein Boot mich geh'n;  
 Er selber blieb zur Seite mir unverdrossen steh'n,  
 Wies mir, wie man die Wogen mit scharfem Schläge bricht,  
 Wie man die Wirbel meidet und mit der Brandung ficht.  
 Und von dem kleinen Rahne ging's flugs in's große Schiff;  
 Es trieben uns die Stürme um manches Felsenriff.  
 Ich saß auf hohem Mast, schaut' über Meer und Land;  
 Es schwebten Berg' und Thürme vorüber mit dem Strand.  
 Der Vater hieß mich merken auf jedes Vogels Flug,  
 Auf aller Winde Wehen, auf aller Wolken Zug;  
 Und bogen dann die Stürme den Mast bis an die Fluth,  
 Und spritzten dann die Wogen hoch über meinen Hut:  
 Da sah der Vater prüfend mir in das Angesicht;  
 Ich saß in meinem Korbe und rüttelte mich nicht.

Da sprach er, und die Wange ward ihm wie Blut so roth:  
 „Glück zu auf deinem Raste, du kleiner Hydriot!“  
 Und heute gab der Vater ein Schwert mir in die Hand,  
 Und weihte mich zum Kämpfer für Gott und Vaterland.  
 Er maß mich mit den Blicken vom Kopf bis zu den Zeh'n;  
 Mir war's, als thät sein Auge hinab in's Herz mir seh'n.  
 Ich hielt mein Schwert gen Himmel, und schaut' ihn sicher an,  
 Und dächte mich zur Stunde nicht schlechter als ein Mann.  
 Da sprach er, und die Wange ward ihm wie Blut so roth:  
 „Glück zu mit deinem Schwerte, du kleiner Hydriot.“

Wilhelm Müller.

2. How ought the contents of the third and fourth lines of the poem to be arranged in prose?
3. What is the difference between Schwert, Degen and Säbel?
4. Decline das Herz.
5. What is a strong verb? what a weak verb? what an irregular (or anomalous) verb?
6. What vowel has the participle of a strong verb, if the preterit has a? i (ie)? o? u?
7. Wherein does the conjugation of reden differ from the conjugation of loben?
8. Mention the irregular (anomalous) verbs.
9. Translate (without dictionary):

(Old matter—Schlegel's Grammar.)

1. Do not wait. 2. Why does he not love his brother? 3. The sun and the moon shine. 4. Your father will hear it. 5. I sold my house. 6. Have we fulfilled our duty? 7. The ice broke. 8. The children drank milk. 9. She has become my friend. 10. This man sees nothing. 11. What were you reading, when I came? 12. I have carried it. 13. Who has cut the bread? 14. The poor man sleeps in safety. 15. The boy brought sugar and salt. 16. I cannot understand them; do you think they can understand me? 17. He never hesitates. 18. How tall you are! 19. Temperance is the best physician. 20. Railways and steamboats facilitate travel.

10. Write the stanzas beginning, severally,

1. Die schönste Jungfrau sitzet
2. Was schert mich Weib, was schert mich Kind?
3. Kennst du das Land, wo die Citronen blüh'n?
4. Ich singe, wie der Vogel singt,
5. Sie singen von Lenz und Liebe, von sel'ger goldner Zeit,

and name the poems from which they are taken, and the poets.

## Fourth Term, or 150 Lessons in all.

June 10th, 1872.

## SOPHOMORE CLASS.

## 1. Translate (without dictionary):

*(Old matter—Whitney's Reader.)***Bruchstücke aus Goethe's Beschreibung des römischen Carnevals.**

Alle Sonn- und Festtage ist der römische Carneval belebt. Die vornehmen und reichen Römer fahren hier eine oder anderthalb Stunden vor Nacht in sehr zahlreicher Reihe spazieren. Die Wagen kommen vom venetianischen Palast herunter, halten sich an der linken Seite, fahren, wenn es schön Wetter ist, an dem Obelisk vorbei, zum Thore hinaus und auf dem Flaminischen Weg, manchmal bis Ponte molle. Die früher oder später Umkehrenden halten sich an die andere Seite; so ziehen die beiden Wagenreihen in der besten Ordnung an einander hin. Sobald die Nacht eingeläutet wird, ist diese Ordnung unterbrochen; jeder wendet wo es ihm beliebt, und sucht seinen nächsten Weg, oft zur Unbequemlichkeit vieler andern Equipagen, welche in dem engen Raum dadurch gehindert und aufgehalten werden. Diese Abendspazierfahrt, welche in allen großen italienischen Städten brillant ist, und in jeder kleinen Stadt, wäre es auch nur mit einigen Kutschen, nachgeahmt wird, lockt viele Fußgänger in den Corso; jedermann kommt, um zu sehen oder gesehen zu werden.

Auf dem freien Platz suchen die Pferde noch einander den Vorsprung abzugewinnen, aber wenn sie einmal in den engen Raum zwischen die beiden Reihen Kutschen hineinkommen, wird meist aller Wettstreit vergeblich. Ein Paar sind gewöhnlich voraus, die alle Kräfte anstrengen. Ungeachtet der gestreuten Puzzolane gibt das Pflaster Feuer; die Mähnen fliegen, das Rauschgold rauscht, und kaum daß man sie erblickt, sind sie vorbey.

Nun wird es für einen jeden Pflicht, ein angezündetes Kerzchen in der Hand zu tragen. Ohne Unterschied, ob man Bekannte oder Unbekannte vor sich habe, sucht man nur immer das nächste Licht auszublasen, oder das seinige wieder anzuzünden.

## 2. Translate (without dictionary):

*(New matter.)***Aus der italienischen Reise.**

So war der Nachmittag vorbeigegangen, ohne daß wir in den Golf von Neapel eingefahren wären. Wir wurden vielmehr immer westwärts getrieben, und das Schiff entfernte sich immer mehr von dem Cap Minerva. Jedermann war verdrießlich und ungeduldig; wir beiden aber, die wir die Welt mit malerischen Augen

betrachteten, konnten damit sehr zufrieden sein, denn bei Sonnenuntergang genossen wir des herrlichsten Anblicks, den uns die ganze Reise gewährt hatte. In dem glänzendsten Farbenschmuck lag Cap Minerva mit den daranstoßenden Gebirgen vor unsern Augen, indeß die Felsen, die sich südwärts hinabziehen, schon einen bläulichen Ton angenommen hatten. Der Vesuv war uns sichtbar. Links lag Capri; die Formen seiner Felswände konnten wir durch den durchsichtigen bläulichen Dunst vollkommen unterscheiden. Unter einem ganz reinen, wolkenlosen Himmel glänzte das ruhige Meer. Wir entzückten uns an dem Anblick.

3. What does Römer mean when not derived from Rom, but correlated with Raum? What building in Germany is called der Römer?

Give native German words for Palast, Equipage, brilliant.

Why is alle Sonn- und Festtage in the accusative?

Explain why schön is left undeclined in wenn es schön Wetter ist.

Make a relative clause of früher oder später Umkehrenden.

What word might be substituted for beliebt in wo es ihm beliebt?

When may room be translated by Raum? when must it be translated by Stube or Zimmer?

In Nun wird es für einen jeden Pflicht, what is the antecedent of es, and what is the case of Pflicht?

What is the case of sich in vor sich habe?

In the clause indeß die Felsen . . . . . angenommen hatten, why does indeß mean *while*, and not *in the mean while*?

Distinguish Renner from Käufer, Rennbahn from Laufbahn, Wettrennen from Wettlauf.

4. Translate (without dictionary):

(Old matter—Schlegel's Grammar.)

1. A child four years old is not strong enough for such a task.
2. Will you have another cup of tea?
3. The city of London, the capital of the kingdom of Great Britain, lies on the Thames.
4. The most beautiful flower has not always the finest odor.
5. Man is made for society.
6. I could not go to school; I had a headache.
7. Give a new book to the best one of your scholars.
8. Do you know that beautiful bird?
9. Do you know what the name of that beautiful bird is?
10. He has travelled much; he has seen the United States, the Netherlands, France, Italy, Switzerland and Russia.
11. To die is nothing; but to live and not to see, that is a misfortune.
12. He showed little patience.
13. What a little dog!
14. I have done my work; has he done his?
15. Charles the First and Lewis the Sixteenth were beheaded.
16. I shall be seventeen on the twelfth.
17. He did not come until half-past ten o'clock.
18. In the year fifteen hundred

and eighty Francis Drake made the first voyage around the world.  
 19. Who brought this letter? to whom did he give it? 20. The dogs of St. Bernard have saved the life of many a man.

5. Write the stanzas beginning severally:

1. Mein Vater, mein Vater, und siehst du nicht dort
2. Kennst du den Berg und seinen Wollenstein?
3. Begrüßet seid mir, edle Herrn,
4. Dort saß ein stolzer König, an Land und Siegen reich,
5. Den Schiffer im kleinen Schiffe
6. So stehst du, o Schloß meiner Väter,
7. Da fand ich eine Stadt, und laut
8. Wenn Wetternacht auf Wolken saß,

Name the poems of which they are parts, and the poets.

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### Fifth Term, or 223 Lessons in all.

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*February 5, 1872.*

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#### JUNIOR CLASS.

1. Translate (with dictionary):

*(New matter.)*

#### Die Entdeckung Amerika's.

Als der Morgen anbrach, sah das Schiffsvolk eine schöne, grüne Insel vor sich liegen. Mit Sonnenaufgang bestiegen sie die Böte und ruderten mit Kriegesmut und fliegenden Fahnen dem Lande zu. Am Ufer hatten sich viele Einwohner der Insel versammelt, die eben so sehr über die seltsamen Gäste erstaunten, als sie selber bei diesen Staunen erregten. Sie waren nackt, von einer röthlichen Kupferfarbe, übrigens wohlgebildet. Ihre Sprache hatte etwas Unzusammenhängendes, Thierisches, und aus allem, was man an ihnen sah, leuchtete so wenig Verstand hervor, daß die Spanier auf den Gedanken kamen, es möchten wohl gar nicht Menschen sein. Das waren sie aber allerdings, nur standen sie auf einer sehr niedrigen Stufe der Entwicklung. Sie kannten den Ackerbau nicht, das milde Klima und die Fruchtbarkeit ihrer Insel gewährte ihnen Mais und Wurzeln im Ueberflusse, und zwang sie nicht zur Sorge für Kleidung und Wohnungen. Große Thiere, die ihre Stärke und ihre List hätten üben können, gab es dort gar nicht. . . . . Columbus nahm die Insel für die castilische Krone in Besitz, mit den Formen und Feierlichkeiten, welche die Portugiesen bei ihren Entdeckungen in Afrika zu beobachten pflegten. Die Eingebornen sahen das mit an und begriffen natürlich nichts davon, wie ihnen die ganze Erscheinung weißer Männer mit Bärten und Kleidern, einer

seltsamen Sprache und noch seltsameren Manieren überhaupt etwas Unbegreifliches sein mußte. Sie wäbnten, sie seien vom Himmel herabgekommen. . . . . Das Gerücht von einer neuen Welt flog nun durch ganz Europa; den lebhaftesten Antheil erregte es jedoch in Spanien selbst. In kurzer Zeit hatten sich fünfzehn- hundert Menschen zusammengefunden, die an dem zweiten Zuge, der nun in das eigentliche Goldland gehen sollte, Theil nehmen wollten. . . . . Vor allen Dingen holte man die Einwilligung des Papstes ein, der auch nicht ermangelte, alle neu zu entdeckenden Länder der Krone von Castilien zu schenken, nur, daß er zu Gunsten Portugals diese Schenkungen auf die Länder jenseits einer Mittagslinie beschränkte, die er hundert Seemeilen westlich von den Azoren zog. Was dießseits gefunden würde, sollte den Portugiesen gehören. Da diese aber mit der Entscheidung unzu- frieden waren, so kam nach einiger Zeit ein Vertrag zu Stande, welchem zufolge die Theilungslinie 370 Meilen westlich von jenen Inseln gezogen ward. Dadurch blieb Brasilien in der Folge das Eigenthum Portugals. B e d e r.

2. Parse hätten üben können. Name the modal auxiliaries; state wherein their conjugation is irregular, and explain the irregularity. Translate: Er kann, muß, will, soll es gethan haben, and Er hat es thun können, müssen, wollen, sollen.

3. What is the gender of Europa? Give the German names of Asia and Australia; of the Atlantic and the Pacific ocean; of the Mediter- ranean and the Baltic sea; of Germany, France, Switzerland; of the Rhine, the Thames, the Danube; of Lisbon, Rome, Naples, Vienna, Ratisbon, Dunkirk, Flushing, the Hague.

4. What German word besides Insel means Island? What is the German for Continent in the phrase "the five continents," and in the phrase "from the island to the continent"? How many German miles make a degree (of latitude)?

5. Translate (without the dictionary):

(Old matter—Whitney's Exercises.)

1. Jestng aside, we must be there at evening. 2. He has made the ascension of Jesus Christ the subject of a painting. 3. I have just seen something beautiful, and heard of something dreadful. 4. Mrs. S. is in town; if you want to see her, come to our house day after to- morrow. 5. Please try a cup of this genuine Russian tea. 6. Alas! the fate that we have to endure. 7. He looked in the eyes of one, and whispered in the ear of another. 8. For ten months the chief of the band of robbers was in prison. 9. The physician would gladly have decided as you wish; but his opinion differs somewhat from yours. 10. I am regularly provided by him with new books and periodicals. 11. Unawares we near the fateful hour. 12. There have been fewer

accidents on this railway. 13. We had been waiting for two hours when you arrived, and we should soon have given you up. 14. The schoolmaster imagines he is very learned. 15. To be able to enjoy life is surely a fine thing. 16. We called both the boys up to us; they came running. 17. I have nothing to reproach him for; he has behaved most handsomely. 18. The book has fallen upon the floor; it is lying there under the table.

---

### Sixth Term, or 300 Lessons in all.

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June 11, 1872.

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#### JUNIOR CLASS.

I. Translate (without the dictionary):

(Old matter.)

#### 1. Wallenstein's Tod.

Aufzug 3. Auftritt 18.

Mar. Doch wie gerlethen wir, die nichts verschuldet,  
In diesen Kreis des Unglücks und Verbrechens?  
Wem brachen wir die Treue? Warum muß  
Der Väter Doppelschuld und Frevelthat  
Uns gräßlich wie ein Schlangenpaar umwinden?  
Warum der Väter unverjöhnter Haß  
Auch uns die Liebenden zerreißen und scheiden?

Wallenstein. Mar, bleibe bei mir! Geh' nicht von mir, Mar!  
Stieh, als man dich im Prag'schen Winterlager  
Ins Zelt mir brachte, einen zarten Knaben  
Des deutschen Winters ungewohnt, die Hand  
War dir erstarrt an der gewicht'gen Fahne,  
Du wolltest männlich sie nicht lassen, damals nahm ich  
Dich auf, bedeckte dich mit meinem Mantel,  
Ich selbst war deine Wärterin, nicht schämt' ich  
Der kleinen Dienste mich, ich pflegte deiner  
Mit weiblich sorgender Geschäftigkeit,  
Bis du, von mir erwärmt, an meinem Herzen,  
Das junge Leben wieder freudig fühltest.  
Wann hab' ich seitdem meinen Sinn verändert?  
Ich habe viele Tausend reich gemacht,  
Mit Ländereien sie beschenkt, belohnt

Mit Ehrenstellen,—dich hab' ich geliebt,  
 Mein Herz, mich selber hab' ich dir gegeben.  
 Sie alle waren Fremdlinge, du warst  
 Das Kind des Hauses—Mar, du kannst mich nicht verlassen,  
 Es kann nicht sein, ich mag's und will's nicht glauben,  
 Daß mich der Mar verlassen kann.....  
 Geh' hin, verlaß mich, diene deinem Kaiser,  
 Laß dich mit einem goldnen Gnadenkettlein,  
 Mit seinem Widderfell dafür belohnen,  
 Daß dir der Freund, der Vater deiner Jugend,  
 Daß dir das heiligste Gefühl nichts galt.  
 .....Pflicht, gegen wen? Wer bist du?  
 Wenn ich am Kaiser unrecht handle, ist's  
 Mein Unrecht, nicht das deinige. Gehörst  
 Du dir? Bist du dein eigener Gebieter,  
 Stehst frei da in der Welt, wie ich, daß du  
 Der Thäter deiner Thaten könntest sein?  
 Auf mich bist du gepflanzt, ich bin dein Kaiser,  
 Mir angehören, mir gehorchen, das  
 Ist deine Ehre, dein Naturgesetz.  
 Und wenn der Stern, auf dem du lebst und wohnst,  
 Aus seinem Gleise tritt, sich brennend wirft  
 Auf eine nächste Welt und sie entzündet,  
 Du kannst nicht wählen, ob du folgen willst;  
 Fort reißt er dich in seines Schwunges Kraft  
 Sammt seinem Ring und allen seinen Monden.  
 Mit leichter Schuld gehst du in diesen Streit,  
 Dich wird die Welt nicht tadeln, sie wird's loben,  
 Daß dir der Freund das Meiste hat gegolten.

(New matter.)

### B. Die Jungfrau von Orleans.

Aufzug 3. Auftritt 6.

**Salbot.** Hier unter diesen Bäumen setzt mich nieder,  
 Und ihr begeht euch in die Schlacht zurück;  
 Ich brauche keines Beistands, um zu sterben.

**Faßolf.** O unglücklich jammervoller Tag!  
 Zu welchem Anblick kommt ihr, Lionel!  
 Hier liegt der Feldherr, auf den Tod verwundet.

**Lionel.** Das wolle Gott nicht! Edler Lord, steht auf!



Talbot. Umsonst! Der Tag des Schicksals ist gekommen,  
Der unsern Thron in Frankreich stürzen soll.

Etotel. Ich kann nicht bleiben.  
Die Unjern fliehen schon von allen Seiten;  
Unwiderstehlich dringt das Mädchen vor—

Talbot. Unsinn, du siegst, und ich muß untergeh'n;  
Mit der Dummheit kämpfen Götter selbst vergebens.  
Verflucht sei, wer sein Leben an das Große  
Und Würd'ge wendet und bedachte Pläne  
Mit weisem Geist entwirft! Dem Narrenkönig  
Gehört die Welt—

Etotel. Mylord! Ihr habt nur noch  
Für wenige Augenblicke Leben—denkt  
An euren Schöpfer!

Talbot. Wären wir als Tapfere  
Durch andere Tapfere besiegt, wir könnten  
Uns trösten mit dem allgemeinen Schicksal.  
Doch solchem großen Gaukelspiel erliegen!  
War unser ernstes arbeitsvolles Leben  
Keines ernsthaften Ausganges werth?

Etotel. Mylord, fahrt wohl!  
Auf Wiederseh'n in einer andern Welt!

Talbot. Bald ist's vorüber, und der Erde geb' ich  
Der ew'gen Sonne die Atome wieder,  
Die sich zu Schmerz und Lust in mir gefügt—  
Und von dem mächt'gen Talbot, der die Welt  
Mit seinem Kriegsruhm füllte, bleibt nichts übrig  
Als eine handvoll leichten Staubs. So geht  
Der Mensch zu Ende.

II.—1. To what is the allusion in der Väter Doppelschuld . . . umwinden?

2. When was the winter-camp at Prague? How many years before Wallenstein's death? How old was Max when he jumped his horse into the Elbe that he might rescue his father? Why was Max unaccustomed to the German winter?

3. What is meant by Laß dich mit seinem Widerseß belohnen?

4. What corps did Isolani command? What were his obligations to Wallenstein?

5. In what respect is Gordon contrasted with Wallenstein?

6. What is the meaning of Wallenstein's Er bricht es sagen, said in

response to Wrangel's *Der Herrschverständigste*, beliebt' ihm zu sagen, sollte Herrscher sein und König?

7. What mental power possessed generally by great commanders is attributed also to Wallenstein, and displayed in his interview with the corporal and soldiers?
8. What justified the poet in claiming the employment of rhyme for the German dramatic muse as an ancient right?

III.—1. Parse *deiner* in *ich pflegte deiner*.

2. In what meanings are *pflegen* and *bewegen* weak? in what meanings strong?
3. Parse *selber* in *mit selber hab' ich dir gegeben*. If the rhythm did not prevent, what word could be substituted? Compare these two words with the English *self*, and state what tendency in language they exemplify.
4. Of what peculiarity in the treatment of the adjective, frequently occurring in Schiller, does the line *o unglücklich jammervoller Tag* offer an illustration?
5. Explain the termination of *leichten* in *eine Handvoll leichten Staubs*.
6. State and explain the anomalies in the conjugation of *wissen*.
7. What is meant by Attraction in grammar? give an illustration of its action in the Indirect discourse. Explain it.
8. In the lines  
*Ich mach' mir an des Illo seinem Stuhl  
 Deswegen auch zu thun, so viel ich kann,  
 Der führt dir gar verwunderliche Reden,*

said, at Count Terzky's banquet, by one servant to another, which construction and which word characterize the speaker as illiterate? What is the force of *dir*?

IV.—Translate (without dictionary):

(*Old matter—Whitney's Exercises.*)

1. The sun is setting, and the air is cool; the Rhine flows quietly past; the evening sunlight illumines the top of the mountain—and I think of the old legend and grow sad.
2. Shakspeare portrays a soul which is not equal to the great deed laid upon it. We see how an oak, planted in a flower-pot, destroys the vessel by the expansion of its mighty roots. What is required of Hamlet, would be to a hero no heavy burden; but Hamlet is not a hero, and he cannot bear it.
3. Often, when you look upon the vast plain, you believe the great

shoreless ocean is spreading out before you. The prairie, hardly less than the ocean itself, fills the mind with the feeling of infinity.

4. The generations of beasts arise and pass away, without a thought of the significance of their life ever arising in them. Among all races of men, on the other hand, every important event is distinguished by an appropriate ceremony.

(*New matter.*)

5. Shallow men believe in luck, in circumstances: it was some body's name; he happened to be there at the time; it was so then, and another day it would have been otherwise. Strong men believe in cause and effect.

V.—1. Give the two lines (from the prologue) which express the value of the approbation of the best men of one's own time.

2. Also the four lines showing what opposite influence great and small objects exercise upon men.

3. Give the closing couplet of the Troopers' song.

4. Give Thekla's song.

5. Write the lines containing Wallenstein's contemptuous opinion of men as commonplace and influenced by custom.

6. In what form does the thought: "Coming events cast their shadows before," appear in Schiller?

7. Write any two passages in the drama, containing each, at least, a dozen lines; or the one beginning *O, nimmer will ich jenen Glauben schelten*; or any considerable portion of Wallenstein's Vision.

## ONE YEAR'S COURSE.

First Term, or 75 Lessons in all.

January 30, 1872.

SENIOR CLASS.

(*New matter—Dictionary allowed.*)

1. Translate:

### Das Riesen-Spielzeug.

Im Elß, auf der Burg Niebed, die auf einem hohen Berge bei einem Wasserfall liegt, waren die Ritter vor Zeiten große Riesen. Einmal ging das Riesen-

Fräulein herab in's Thal, wollte sehen, wie es da unten wäre, und kam bis nach Haslach auf ein Ackerfeld, das gerade von den Bauern gepflügt ward. Sie blieb vor Verwunderung stehen und schaute den Pflug, die Pferde und die Leute an, das ihr alles etwas Neues war. „Ei," sprach sie, und ging herzu, „das nehm' ich mir mit.“ Da kniete sie nieder zur Erde, breitete ihre Schürze aus, strich mit der Hand über das Feld, fing alles zusammen und that's hinein. Nun lief sie ganz vergnügt nach Hause, den Felsen hinaufspringend; wo der Fels so jäh ist, daß ein Mensch mühsam Klettern muß, da that sie einen Schritt und war oben. Der Ritter saß gerade am Tisch, als sie eintrat. „Ei, mein Kind," sprach er, „was bringst du da? Die Freude schaut dir ja aus den Augen heraus.“ Sie machte geschwind ihre Schürze auf und ließ ihn hineinblicken. „Was hast du so Zappelliches darin?“ „Ei, Vater, gar zu artiges Spielzeug! So was Schönes hab' ich mein Lebtag' noch nicht gehabt.“ Darauf nahm sie eines nach dem andern heraus und stellte es auf den Tisch: den Pflug, die Bauern mit ihren Pferden; lief herum, schaute es an, lachte und klatschte vor Freude in die Hände. Der Vater aber sprach: „Kind, das ist kein Spielzeug, da hast du etwas Schlimmes gethan! Geh' nur gleich und trag's wieder in's Thal hinab.“ Das Fräulein weinte, es half aber nichts. „Mir ist der Bauer kein Spielzeug; ich leid's nicht, daß du mir murrst; pack alles sachte wieder ein und trag's an den nämlichen Platz, wo du's genommen hast. Bauet der Bauer nicht sein Ackerfeld, so haben wir Riesen auf unserm Felsen-Nest nichts zu leben.“

Die Brüder Grimm.

### Die Knabenzeit.

Wie glücklich, wem das Knabenkleid  
Noch um die Schultern fliegt!  
Nie lästert er die böse Zeit,  
Stets munter und vergnügt.

Das hölzerne Husarenschwert  
Belustiget ihn ißt,  
Der Kreisel und das Stedenpferd,  
Auf dem er herrisch sitzt.

Und schwingt er durch die blaue Luft  
Den bunt gestreiften Ball,  
So achtet er nicht Blüthenduft,  
Nicht Lerch', nicht Nachtigall.

Nichts trübt ihn, nichts in weiter Welt  
Sein heit'res Angesicht,  
Als wenn sein Ball in's Wasser fällt,  
Als wenn sein Schwert zerbricht.

D Knabe, spiel' und laufe nur  
Den lieben langen Tag  
Durch Garten und durch grüne Flur  
Den Schmetterlingen nach!

Bald schwitzest du, nicht immer froh,  
Im engen Kämmerlein,  
Und lernst vom dicken Cicero  
Verschimmeltes Latein!

Hölty.

2. What is Inversion? Why is the first clause of the last sentence in the prose piece inverted? why the second clause?

3. What is Transposition? what is the rule for transposition? select an instance from the prose piece.

4. What is the singular of die Bauern? to what rule is this plural an exception? Die Schultern being a regular plural, what is the gender of Schulter?

5. Are the words sie and ihr in the third sentence correct? referring, as they do, to Riesenfräulein. What are the rules for the agreement of pronouns and pronominals, and of adjectives (and articles) with diminutives to which they refer or relate?

6. What is the difference between Männer, Menschen and Leute? between Pferd and Roß? Argue the etymological connection of the words Roß and Horse.

7. Sie blieb stehen.—Give the same number and person of the present, the future, and the perfect. Translate: I keep my seat. I do not rise (remain abed).

8. Give the active form to the clause: Das von den Bauern gepflügt ward.

9. Translate (without dictionary):

(Old matter—Whitney.)

1. The blue flowers in the little basket are very beautiful. 2. The hero loves the noble and the dangerous. 3. The merchant gives me my bill, and I give him his money. 4. Who gives you permission? 5. The parson has two sons; the eldest is just sixteen years old, and the second is in the twelfth year of his age. 6. I have a cousin who talks too much, and no one heeds what he says. 7. We have fought well, but many have fallen on our side. 8. It rained very hard yesterday. 9. The ship has gone down, but the passengers are saved. 10. Let us begin. 11. Will the child be loved? 12. The churches and palaces, the antiquities and ruins pleased the strangers. 13. Our friend

enjoys his life. 14. I sincerely rejoice at your unexpected good fortune.  
15. Would she have called me her enemy?

10. Give the dates of Lessing's birth and death. What is the moral of *Nathan der Weise*, and specially of the story of the three rings? From what source did Lessing take the story? How has he altered and ennobled it?

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## Second Term, or 150 Lessons in all.

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June 14, 1872.

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### SENIOR CLASS.

I. Translate (without dictionary):

(Old matter.)

#### 1. Göthe über Hamlet.

Man denke sich einen Prinzen, wie ich ihn geschildert habe, dessen Vater unvermuthet stirbt. Ehrgeiz und Herrschsucht sind nicht die Leidenschaften, die ihn beleben; er hatte sich's gefallen lassen, Sohn eines Königs zu sein; aber nun ist er genöthigt, auf den Abstand aufmerksamer zu werden, der den König vom Unterthan scheidet. Das Recht zur Krone war nicht erblich, und doch hätte ein längeres Leben des Vaters die Ansprüche seines einzigen Sohnes mehr befestigt, und die Hoffnung zur Krone gesichert. Dagegen sieht er sich nun durch seinen Oheim, ungeachtet scheinbarer Versprechungen, vielleicht auf immer ausgeschlossen; er fühlte sich nun arm an Gnade, an Gütern, und fremd in dem was er von Jugend auf als sein Eigenthum betrachten konnte. Hier nimmt sein Gemüth die erste traurige Richtung.

#### B. Aus der siebenten Scene des Lustspiels: *Wadeküren*.

Louise. Das Buch muß er mir borgen, die Lieder singe ich alle durch. Man kann's gleich, die Musik steht dabei. Das hat er eingeknißt, vielleicht sein Lieblingslied. (Sie singt erst leise, dann immer lauter: „Wohlauf noch getrunken den funkelnden Wein!“)

Valentin (der unbemerkt eingetreten ist, nach beendetem Gesang). Prächtig! allerliebst! Das ist dasselbe Lied, das unser Kleiner den ganzen Tag brummt.

Louise. O nicht doch, Valentin, er hat kein Gehör, er hält ein Lied für das andere.

Valentin. Das Lied kenne ich; und da ist ja auch unserm Kleinen sein Buch, das er überall sucht — der wird 'ne Freude haben, das bring' ich ihm gleich hin.

Louise. Auf keinen Fall. Das Buch darf Reinhold nicht wieder haben, und er sagt ihm nichts —

Valentin. Aber er fragt mich des Tags zehnmal, ob ich's nicht gesehen habe.

Louise. So sag' er nein!

Valentin. Das ist aber gelogen.

Louise. Meinetwegen, Valentin, laß er mich nur in Ruhe.

Valentin (für sich). Die alte gnädige Frau schilt, wenn ich lüge, und die Kinder befehlen es mir. Da werde ein Anderer klug daraus. (Ab.)

Louise. Da hätte ich gut ankommen können. (Versteckt das Buch.) Das ist eine schöne Geschichte.

### 3. Aus der dreizehnten Scene.

Reinhold. Ich habe Alles noch einmal überschlagen.

Louise. So, Sie scheinen mir sehr sicher.

Reinhold. Und nun gerade heraus.

Louise. Machen Sie die Rechnung nicht ohne den Wirth, denn wenn die Mutter erfährt—

Reinhold. Ja, die darf es ja eben nicht wissen.

Louise. Nun, aber zuletzt wird sie's doch erfahren.

Reinhold. Am besten gar nicht. Wenn wir's ihr verheimlichen könnten.

Louise (bei Seite). Eine heimliche Ehe. (Laut.) Was meinen Sie nur eigentlich?

Reinhold. Nun gerade heraus, Louise. Sie sind eine reiche Frau!

Louise (bei Seite). Er wird mir doch nicht sagen wollen, daß er mich des Geldes wegen heirathet.

Reinhold. Mit einem Worte: Ich habe fünf hundert Thaler Schulden gemacht.

Louise (bei Seite). Immer besser, er nimmt mich um seine Schulden zu bezahlen.

Reinhold. Da dachte ich denn, es wäre am besten, um der Mutter den Aerger zu ersparen, wenn ich Sie bis zu meiner Majorennität um die fünf hundert Thaler anpumpfte.

Louise. Ach! Und das ist Alles, was Sie mir sagen wollten?

Reinhold. Ich dachte, Sie hätten schon errathen.

Louise. Darum diese weiten Ausschweife?

Reinhold. Freilich! Was dachten Sie denn nur, Louise?

Louise (bei Seite, mit thränenerschlackter Stimme). Es ist abschenslich!

Reinhold. Nicht wahr, Louise, die Sache ist abgemacht?

*Louise.* Sie sind ein Narr mit Ihren Heimlichkeiten—Was gehen mich Ihre Schulden an? Glauben Sie, daß ich auf Pfänder borge? Suchen Sie sich Ihre Vertrauten und Borger, wo Sie wollen und können, aber mich lassen Sie ein für allemal aus dem Spiele. Das ist abscheulich von Ihnen!

II.—1. What is the case of *sich*, what the antecedent of *es*, and what the case of *Sohn* in *Er hatte sich's gefallen lassen, Sohn eines Königs zu sein*?

2. Parse *hätte befestigt*. What other form of the verb might be substituted? To what extent are these two forms interchangeable?

3. Of what noun is *Gütern* the dative plural?

4. From what word is *Gemüth* derived? What is the wider, and what the narrower sense of that word? In what respect are some of its compounds exceptional?

5. From what verb is *darf*? Name the six modal auxiliaries. On what theory is the anomaly of their conjugation accounted for?

6. Explain the use of *getrunken* in *Wohlauf! noch getrunken den funkelnden Wein!* What sort of sparkling does *funkein* denote? what word means *to sparkle* in the sense of *to effervesce*?

7. Which superlative is *am besten*? Give the other.

8. Give substitutes for *Glück, Unglück, Fersen, Schlägerei, alte Frau* of a kind with *anpumpen*.

III.—1. From what book is the disquisition upon *Hamlet* taken?

2. What book is spoken of in the seventh scene of the comedy?

3. To whom is the name *Student* restricted? What is *Colleg*? How are the classes of a *Gymnasium* named? how the scholars in these classes?

4. What is the literal meaning of the word *Polterabend*? what is a *Polterabend*?

5. What is the name of the highway from *Heidelberg* to *Darmstadt*?

6. State the subject and describe the form of *Schiller's Song of the Bell*.



## IV.—Translate (without dictionary):

(Old matter—Whitney.)

1. Whence they come and whither they are going are both secrets.
2. We rested ourselves where a large oak spread abroad a grateful shade.
3. The more friendly I grow, the more repelling does he become.
4. My cousin takes a music lesson twice a week.
5. Thou foolish man! how canst thou act so imprudently?
6. If it is you, step nearer.
7. He persecutes me, who have never harmed him; and he loves thee, who canst not love him in return.
8. The family have been here since the first of August; on the twenty-fifth they intend to make an excursion into the country; and they will start at five o'clock in the morning.
9. Even if you have no inclination to it, do it to oblige your friend.
10. We have had enough of the rude, inconsiderate behavior of these men.
11. What means this standing and waiting? are you not allowed to go?
12. As soon as the lamp was lighted, the interrupted work was taken up again.
13. Whoever risks such a thing, relies upon an accident.

(New matter.)

14. He said: "I had nothing to do with it." He said, he had nothing to do with it.
15. If a man wish to conceal anything he carries, those whom he meets know that he conceals something; and usually they know what he conceals.

V.—Write the following quotations from *Die Glocke*:

1. The opening stanza.
2. The four lines beginning *Das ist's ja,*
3. The six lines beginning *O zarte Sehnsucht,*
4. The six lines beginning *Denn wo das Strenge*
5. The three lines beginning *Doch mit des Geistes Mächten*
6. The three lines beginning *Ein süßer Trost*
7. The four lines beginning *Arbeit ist des Bürgers Stolz,*
8. The four lines beginning *Gefährlich ist's,*

# A METHOD OF INTEGRATING THE SQUARE ROOTS OF QUADRATICS.

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## CONTENTS.

PART I. Upon  $\int \sin^p \theta \cos^q \theta \dots \dots \dots (a)$

PART II. Upon  $\int (a + bx + cx^2)^{\frac{n}{2}} x^m dx \dots \dots \dots (b)$

## PART I.

To integrate the general form,  $\int \sin^p \theta \cos^q \theta d\theta \dots \dots \dots (a)$ , in all cases where  $p$  and  $q$  are integers, positive or negative.

Apply to (a) the formula for integrating by parts, viz.:  $\int u dv = vu - \int v du$ , by making  $u = \sin^{p-1} \theta \cos^{q-1} \theta$  and  $dv = \sin \theta \cos \theta$ ;  $\therefore v = \frac{\sin^2 \theta}{2}$ , or  $v = -\frac{\cos^2 \theta}{2}$ . If  $v = \frac{\sin^2 \theta}{2}$ , we obtain formula (1) of the succeeding summary; but if  $v = -\frac{\cos^2 \theta}{2}$ , we then obtain formula (2).

Again, since  $1 = \sin^2 \theta + \cos^2 \theta$ ,  $\int \sin^p \theta \cos^q \theta d\theta$ ,

$$= \int \sin^{p+2} \theta \cos^q \theta d\theta + \int \sin^p \theta \cos^{q+2} \theta d\theta \dots \dots \dots (c)$$

$$= \int \sin^p \theta \cos^{q-2} \theta d\theta - \int \sin^{p+2} \theta \cos^{q-2} \theta d\theta \dots \dots \dots (d)$$

$$= \int \sin^{p-2} \theta \cos^q \theta d\theta - \int \sin^{p-2} \theta \cos^{q+2} \theta d\theta \dots \dots \dots (e)$$

1st. Substitute in place of the last term of (c) its value as given by (1), from which process we shall obtain formula (3) of the summary.

2d. Substitute in place of the last term but one of (c), its value as given by (2), from which we shall obtain formula (4).

3d. Substitute in place of the last term of (d) its value as given by (2), from which we shall obtain formula (5).

4th. Substitute in place of the last term of (e) its value as given by (1), from which we shall obtain formula (6).

## SUMMARY.

$$\int \sin^p \theta \cos^q \theta d\theta \quad . . . . . (a)$$

$$= \frac{1}{p+1} \sin^{p+1} \theta \cos^{q-1} \theta + \frac{q-1}{p+1} \int \sin^{p+2} \theta \cos^{q-2} \theta d\theta \quad . . . . . (1)$$

$$= -\frac{1}{q+1} \sin^{p-1} \theta \cos^{q+1} \theta + \frac{p-1}{q+1} \int \sin^{p-2} \theta \cos^{q+2} \theta d\theta \quad . . . . . (2)$$

$$= \frac{1}{p+1} \sin^{p+1} \theta \cos^{q+1} \theta + \frac{p+q+2}{p+1} \int \sin^{p+2} \theta \cos^q \theta d\theta \quad . . . . . (3)$$

$$= -\frac{1}{q+1} \sin^{p+1} \theta \cos^{q+1} \theta + \frac{p+q+2}{q+1} \int \sin^p \theta \cos^{q+2} \theta d\theta \quad . . . . . (4)$$

$$= \frac{1}{p+q} \sin^{p+1} \theta \cos^{q-1} \theta + \frac{q-1}{p+q} \int \sin^p \theta \cos^{q-2} \theta d\theta \quad . . . . . (5)$$

$$= -\frac{1}{p+q} \sin^{p-1} \theta \cos^{q+1} \theta + \frac{p-1}{p+q} \int \sin^{p-2} \theta \cos^q \theta d\theta \quad . . . . . (6)$$

In attempting to integrate the expression,  $\int \sin^p \theta \cos^q \theta d\theta \quad . . . (a)$ , (when  $p$  and  $q$  are integers, either positive or negative), there can only nine cases arise. These we shall now discuss seriatim, and, by showing them each to be integrable, prove the original expression integrable.

1. If  $p$  and  $q$  are both positive integers, one odd and the other even, by repeated applications of (5) and (6), (a) will depend either upon

$$\int \sin \theta d\theta = -\cos \theta,$$

or upon  $\int \cos \theta d\theta = \sin \theta.$

2. If  $p$  and  $q$  are both positive and even, by (5) and (6) finally we have only to integrate

$$\int d\theta = \theta.$$

3. If  $p$  and  $q$  are both positive and odd, by (5) and (6), (a) finally depends upon

$$\int \sin \theta \cos \theta d\theta = \frac{\sin^2 \theta}{2}, \quad \text{or} \quad = -\frac{\cos^2 \theta}{2}.$$

4. If  $p$  and  $q$  are both negative integers, one odd and the other even, by (3) and (4), (a) will depend either upon

$$\begin{aligned} \int \frac{d\theta}{\sin \theta} &= \int \frac{\sin \theta d\theta}{\sin^2 \theta} = \frac{1}{2} \left[ \int \frac{\sin \theta d\theta}{1 - \cos \theta} + \int \frac{\sin \theta d\theta}{1 + \cos \theta} \right] = \frac{1}{2} \log \left[ \frac{1 - \cos \theta}{1 + \cos \theta} \right] \\ &= \log [\operatorname{cosec} \theta - \cotang \theta] = \log \tan \frac{\theta}{2}, \end{aligned}$$

or upon

$$\int \frac{d\theta}{\cos\theta} = \int \frac{\cos\theta d\theta}{\cos^2\theta} = \frac{1}{2} \left[ \int \frac{\cos\theta d\theta}{1 + \sin\theta} + \int \frac{\cos\theta d\theta}{1 - \sin\theta} \right] = \frac{1}{2} \log \left[ \frac{1 + \sin\theta}{1 - \sin\theta} \right] \\ = \log [\sec\theta + \tan\theta] = \log \tan \left( \frac{\theta}{2} + \frac{\pi}{4} \right).$$

5. If  $p$  and  $q$  are both negative and even, by (3) and (4), (a) will finally depend either upon

$$\int \frac{d\theta}{\sin^2\theta} = -\cotang\theta, \quad \text{or upon} \quad \int \frac{d\theta}{\cos^2\theta} = \tan\theta.$$

6. If  $p$  and  $q$  are both negative and odd, by (3) and (4), (a) will depend upon

$$\int \frac{d\theta}{\sin\theta \cos\theta} = \int \frac{(\sin^2\theta + \cos^2\theta)}{\sin\theta \cos\theta} d\theta = \int \frac{\sin\theta}{\cos\theta} d\theta + \int \frac{\cos\theta}{\sin\theta} d\theta \\ = \log \sin\theta - \log \cos\theta = \log \tan\theta = -\log \cotang\theta.$$

7. If  $p$  and  $q$  are one odd and the other even, one positive and the other negative.

When the odd number is numerically the larger, by (1) and (2), (a) will depend upon one of the four following forms ( $n$  being an integer):

$$\int \sin^{2n+1}\theta d\theta, \quad \int \cos^{2n+1}\theta d\theta, \quad \int \frac{d\theta}{\sin^{2n+1}\theta}, \quad \int \frac{d\theta}{\cos^{2n+1}\theta};$$

which forms have been already integrated.

When the even number is numerically the larger, we have similarly, by (1) and (2), four forms:

$$\int \frac{\sin^{2n}\theta d\theta}{\cos\theta}, \quad \text{which, by (6), depends on} \quad \int \frac{d\theta}{\cos\theta} = \log \tan \left( \frac{\theta}{2} + \frac{\pi}{4} \right);$$

$$\int \frac{\cos^{2n}\theta d\theta}{\sin\theta}, \quad \text{" " (5), " " } \int \frac{d\theta}{\sin\theta} = \log \tan \frac{\theta}{2},$$

$$\int \frac{\sin\theta d\theta}{\cos^{2n}\theta}, \quad \text{" " (4), " " } \int \sin\theta d\theta = -\cos\theta,$$

$$\int \frac{\cos\theta d\theta}{\sin^{2n}\theta}, \quad \text{" " (3), " " } \int \cos\theta d\theta = \sin\theta.$$

8. If  $p$  and  $q$  are both even, one positive and the other negative, by (1) and (2) we have the four following forms:

$$\int \sin^{2n}\theta d\theta, \quad \int \frac{d\theta}{\sin^{2n}\theta}, \quad \int \cos^{2n}\theta d\theta, \quad \int \frac{d\theta}{\cos^{2n}\theta};$$

which forms have already been integrated.



$$3. \int \frac{\sin \theta d\theta}{\cos^2 \theta} = \sec \theta = \frac{1}{\cos \theta}.$$

$$4. \int \frac{\cos \theta d\theta}{\sin^2 \theta} = -\operatorname{cosec} \theta = -\frac{1}{\sin \theta}.$$

$$5. \int \sin^2 \theta d\theta = \frac{1}{2} (\theta - \sin \theta \cos \theta).$$

$$6. \int \cos^2 \theta d\theta = \frac{1}{2} (\theta + \sin \theta \cos \theta).$$

$$7. \int \frac{\sin^2 \theta d\theta}{\cos^2 \theta} = \operatorname{tang} \theta - \theta.$$

$$8. \int \frac{\cos^2 \theta d\theta}{\sin^2 \theta} = -\operatorname{cotang} \theta - \theta.$$

$$9. \int \frac{d\theta}{\sin^2 \theta \cos^2 \theta} = \operatorname{tang} \theta - \operatorname{cotang} \theta.$$

$$10. \int \sin \theta \cos \theta d\theta = \frac{1}{2} \sin^2 \theta, \text{ or } = -\frac{1}{2} \cos^2 \theta.$$

It is possible to apply each of the formulæ from (1) to (6), inclusive, to that part of itself which is still under the sign of integration, or to the corresponding part of either of the others. This operation can be repeated at will, and we thus obtain formulæ which are some of them useful, as they give at once the integral of expressions which it would otherwise require several processes to effect.

By repeatedly applying each of the formulæ (1) to (6) to *itself*, as suggested, we have the general forms of such expansions in the six following formulæ, which we arrive at after effecting  $n$  integrations ( $n$  being an integer greater than unity). These formulæ may be established by mathematical induction.

$$\int \sin^p \theta \cos^q \theta d\theta,$$

by (1):

$$\begin{aligned} &= \frac{1}{p+1} \sin^{p+1} \theta \cos^{q-1} \theta + \frac{(q-1)}{(p+1)} \cdot \frac{1}{(p+3)} \sin^{p+3} \theta \cos^{q-3} \theta + \\ &\quad \frac{(q-1)}{(p+1)} \cdot \frac{(q-3)}{(p+3)} \cdot \frac{1}{(p+5)} \sin^{p+5} \theta \cos^{q-5} \theta + \dots + \\ &\quad \frac{(q-1)(q-3) \dots [q+1-2(n-1)]}{(p+1)(p+3) \dots [p-1+2(n-1)]} \cdot \frac{\sin^{p-1+2n} \theta \cos^{q+1-2n} \theta}{[p+1+2(n-1)]} + \\ &\quad \frac{(q-1)(q-3) \dots (q+1-2n)}{(p+1)(p+3) \dots (p-1+2n)} \int \sin^{p+2n} \theta \cos^{q-2n} \theta d\theta \quad \dots (15) \end{aligned}$$

by (2):

$$\begin{aligned}
 &= -\frac{1}{q+1} \sin^{p-1}\theta \cos^{q+1}\theta - \frac{(p-1)}{(q+1)} \cdot \frac{1}{(q+3)} \sin^{p-3}\theta \cos^{q+3}\theta - \\
 &\quad \frac{(p-1)}{(q+1)} \cdot \frac{(p-3)}{(q+3)} \cdot \frac{1}{(q+5)} \sin^{p-5}\theta \cos^{q+5}\theta - \dots - \\
 &\quad \frac{(p-1)(p-3)\dots[p+1-2(n-1)]}{(q+1)(q+3)\dots[q-1+2(n-1)]} \cdot \frac{\sin^{p+1-2n}\theta \cos^{q-1+2n}\theta}{[q+1+2(n-1)]} + \\
 &\quad \frac{(p-1)(p-3)\dots(p+1-2n)}{(q+1)(q+3)\dots(q-1+2n)} \int \sin^{p-2n}\theta \cos^{q+2n}\theta d\theta \dots (16)
 \end{aligned}$$

by (3):

$$\begin{aligned}
 &= \frac{1}{p+1} \sin^{p+1}\theta \cos^{q+1}\theta + \frac{(p+q+2)}{(p+1)} \cdot \frac{1}{(p+3)} \sin^{p+3}\theta \cos^{q+1}\theta + \\
 &\quad \frac{(p+q+2)}{(p+1)} \cdot \frac{(p+q+4)}{(p+3)} \cdot \frac{1}{(p+5)} \sin^{p+5}\theta \cos^{q+1}\theta + \dots + \\
 &\quad \frac{(p+q+2)(p+q+4)\dots[p+q+2(n-1)]}{(p+1)(p+3)\dots[p-1+2(n-1)]} \cdot \frac{\sin^{p-1+2n}\theta \cos^{q+1}\theta}{[p+1+2(n-1)]} + \\
 &\quad \frac{(p+q+2)(p+q+4)\dots(p+q+2n)}{(p+1)(p+3)\dots[p+1+2(n-1)]} \int \sin^{p+2n}\theta \cos^q\theta d\theta \dots (17)
 \end{aligned}$$

by (4):

$$\begin{aligned}
 &= -\frac{1}{q+1} \sin^{p+1}\theta \cos^{q+1}\theta - \frac{(p+q+2)}{(q+1)} \cdot \frac{1}{(q+3)} \sin^{p+1}\theta \cos^{q+3}\theta - \\
 &\quad \frac{(p+q+2)}{(q+1)} \cdot \frac{(p+q+4)}{(q+3)} \cdot \frac{1}{(q+5)} \sin^{p+1}\theta \cos^{q+5}\theta - \dots - \\
 &\quad \frac{(p+q+2)(p+q+4)\dots[p+q+2(n-1)]}{(q-1)(q+3)\dots[q-1+2(n-1)]} \cdot \frac{\sin^{p+1}\theta \cos^{q-1+2n}\theta}{[q+1+2(n-1)]} + \\
 &\quad \frac{(p+q+2)(p+q+4)\dots(p+q+2n)}{(q+1)(q+3)\dots[q+1+2(n-1)]} \int \sin^p\theta \cos^{q+2n}\theta d\theta \dots (18)
 \end{aligned}$$

by (5):

$$\begin{aligned}
 &= \frac{1}{p+q} \sin^{p+1}\theta \cos^{q-1}\theta + \frac{(q-1)}{(p+q)} \cdot \frac{1}{(p+q-2)} \sin^{p+1}\theta \cos^{q-3}\theta + \\
 &\quad \frac{(q-1)}{(p+q)} \cdot \frac{(q-3)}{(p+q-2)} \cdot \frac{1}{(p+q-4)} \sin^{p+1}\theta \cos^{q-5}\theta + \dots + \\
 &\quad \frac{(q-1)(q-3)\dots[q+1-2(n-1)]}{(p+q)(p+q-2)\dots[p+q+2-2(n-1)]} \cdot \frac{\sin^{p+1}\theta \cos^{q+1-2n}\theta}{[p+q-2(n-1)]} + \\
 &\quad \frac{(q-1)(q-3)\dots(q+1-2n)}{(p+q)(p+q-2)\dots[p+q-2(n-1)]} \int \sin^p\theta \cos^{q-2n}\theta d\theta (19)
 \end{aligned}$$

by (6):

$$\begin{aligned}
 &= -\frac{1}{p+q} \sin^{p-1}\theta \cos^{q+1}\theta - \frac{(p-1)}{(p+q)} \cdot \frac{1}{(p+q-2)} \sin^{p-3}\theta \cos^{q+1}\theta - \\
 &\quad \frac{(p-1)}{(p+q)} \cdot \frac{(p-3)}{(p+q-2)} \cdot \frac{1}{(p+q-4)} \sin^{p-5}\theta \cos^{q+1}\theta - \dots - \\
 &\quad \frac{(p-1)(p-3)\dots[p+1-2(n-1)]}{(p+q)(p+q-2)\dots[p+q+2-2(n-1)]} \cdot \frac{\sin^{p+1-2n}\theta \cos^{q+1}\theta}{[p+q-2(n-1)]} + \\
 &\quad \frac{(p-1)(p-3)\dots[p+1-2n]}{(p+q)(p+q-2)\dots[p+q-2(n-1)]} \int \sin^{p-2n}\theta \cos^q\theta d\theta. \quad (20)
 \end{aligned}$$

If formulæ (1) to (6), inclusive, may be called *primaries*, we shall now give six *secondary* formulæ, (21) to (26), inclusive, which can be obtained by one operation of one of the primaries upon one of the others. These six (viz.: (21) to (26)), together with the six contained in the general formulæ (15) to (20), inclusive, are all the secondaries obtainable, and they may serve as an example of the tertiaries, &c., possible:

$$\int \sin^p\theta \cos^q\theta d\theta,$$

by applying (1) to (3):

$$\begin{aligned}
 &= \frac{1}{p+1} \sin^{p+1}\theta \cos^{q-1}\theta + \frac{(q-1)}{(p+1)(p+3)} \sin^{p+3}\theta \cos^{q-1}\theta + \\
 &\quad \frac{(q-1)(p+q+2)}{(p+1)(p+3)} \int \sin^{p+4}\theta \cos^{q-2}\theta d\theta \dots \dots \dots (21)
 \end{aligned}$$

by applying (2) to (4),

$$\begin{aligned}
 &= -\frac{1}{q+1} \sin^{p-1}\theta \cos^{p+1}\theta - \frac{(p-1)}{(q+1)(q+3)} \sin^{p-1}\theta \cos^{q+3}\theta + \\
 &\quad \frac{(p-1)(p+q+2)}{(q+1)(q+3)} \int \sin^{p-2}\theta \cos^{q+4}\theta d\theta \dots \dots \dots (22)
 \end{aligned}$$

by applying (1) to (5):

$$\begin{aligned}
 &= \frac{1}{p+q} \sin^{p+1}\theta \cos^{q-1}\theta + \frac{(q-1)}{(p+q)(p+1)} \sin^{p+1}\theta \cos^{q-3}\theta + \\
 &\quad \frac{(q-1)(q-3)}{(p+q)(p+1)} \int \sin^{p+2}\theta \cos^{q-4}\theta d\theta \dots \dots \dots (23)
 \end{aligned}$$

by applying (2) to (6):

$$\begin{aligned}
 &= -\frac{1}{p+q} \sin^{p-1}\theta \cos^{q+1}\theta - \frac{(p-1)}{(p+q)(q+1)} \sin^{p-3}\theta \cos^{q+1}\theta + \\
 &\quad \frac{(p-1)(p-3)}{(p+q)(q+1)} \int \sin^{p-4}\theta \cos^{q+2}\theta d\theta \dots \dots \dots (24)
 \end{aligned}$$



by applying (3) to (4):

$$= \frac{1}{p+1} \sin^{p+1} \theta \cos^{q+2} \theta - \frac{1}{q+1} \sin^{p+2} \theta \cos^{q+1} \theta + \\ \frac{(p+q+2)(p+q+4)}{(p+1)(q+1)} \int \sin^{p+2} \theta \cos^{q+2} \theta d\theta \quad . \quad . \quad . \quad . \quad . \quad . \quad (25)$$

by applying (5) to (6):

$$= \frac{(p-1)}{(p+q)(p+q-2)} \sin^{p+1} \theta \cos^{q-1} \theta - \frac{(q-1)}{(p+q)(p+q-2)} \sin^{p-1} \theta \cos^{q+1} \theta + \\ \frac{(p-1)(q-1)}{(p+q)(p+q-2)} \int \sin^{p-2} \theta \cos^{q-2} \theta d\theta \quad . \quad . \quad . \quad . \quad . \quad . \quad (26)$$

## PART II.

---

To integrate the general form,  $u = \int (a + bx + cx^2)^{\frac{n}{2}} x^m dx$ . . . (b)  
 in all cases when  $m$  and  $n$  are integers, positive or negative, provided  
 the constants  $a$ ,  $b$ , and  $c$  are such as to render the integral real.

By change of form, we have, if

$$u = \int (a + bx + cx^2)^{\frac{n}{2}} x^m dx \quad . . . . . (b)$$

$$u = \sqrt{-c^n} \int \left[ \frac{b^2 - 4ac}{4c^2} - \left( x + \frac{b}{2c} \right)^2 \right]^{\frac{n}{2}} x^m dx \quad . . . (f)$$

$$u = \sqrt{-a^n} \int \left[ \frac{b^2 - 4ac}{4a^2} - \left( x^{-1} + \frac{b}{2a} \right)^2 \right]^{\frac{n}{2}} x^{m+n} dx \quad . . (g)$$

$$u = \sqrt{c^n} \int \left[ \left( x + \frac{b}{2c} \right)^2 - \frac{b^2 - 4ac}{4c^2} \right]^{\frac{n}{2}} x^m dx \quad . . . . (h)$$

$$u = \sqrt{a^n} \int \left[ \left( x^{-1} + \frac{b}{2a} \right)^2 - \frac{b^2 - 4ac}{4a^2} \right]^{\frac{n}{2}} x^{m+n} dx \quad . . . (k)$$

We shall now point out briefly what transformations will cause  
 these forms to depend for their integration upon that of (a).

1st. Formula (f) may be integrated when  $m$  is positive and  
 $r^2 = \frac{b^2 - 4ac}{4c^2} > 0$ ; for, let  $x + \frac{b}{2c} = r \sin \theta$ ;  $\therefore dx = r \cos \theta d\theta$ , and  
 $\left[ \frac{b^2 - 4ac}{4c^2} - \left( x + \frac{b}{2c} \right)^2 \right]^{\frac{n}{2}} = r^n \cos^n \theta$ . Substituting, we have,

$$u = r^{n+m+1} \sqrt{-c^n} \int \left[ \sin \theta - \frac{b}{2cr} \right]^n \cos^{n+1} \theta d\theta \quad . . . (27)$$

which is real when  $c$  is negative, and is integrated by expanding, mul-  
 tiplying, and thus obtaining several terms of the form of (a).

This transformation might have been effected with equal ease by putting  $x + \frac{b}{2c} = r \cos \theta$ , etc., etc.

2d. Formula (g) may be integrated when  $m$  is negative, and  $r^2 = \frac{b^2 - 4ac}{4a^2} > 0$ ; for, let  $x^{-1} + \frac{b}{2a} = r \sin \theta$ ;  $\therefore -\frac{dx}{x^2} = r \cos \theta d\theta$ , and  $\left[\frac{b^2 - 4ac}{4a^2} - \left(x^{-1} + \frac{b}{2a}\right)^2\right]^{\frac{n}{2}} = r^n \cos^n \theta$ . Substituting, we have,

$$u = -r^{-m-1} \sqrt{-a^n} \int \left[ \sin \theta - \frac{b}{2ar} \right]^{-(m+n+2)} \cos^{n+1} \theta d\theta \quad \dots (28)$$

which is real when  $a$  is negative, and it is integrable whenever we can make  $-(m+n+2) > 0$ , in which  $m$  is negative. This we can always effect by making the exponent of the quadratic any minus number desirable, as follows:

Multiply and divide (g) by

$$\left[ \frac{b^2 - 4ac}{4a^2} - \left(x^{-1} + \frac{b}{2c}\right)^2 \right]^{\frac{s}{2}},$$

in which  $-(m-s+2) > 0$ , and expand the numerator to the power indicated by the exponent  $\frac{s+n}{2}$  (which exponent must be an integer when  $s$  and  $n$  are odd). Thus we obtain several terms, each of which can be integrated by (28).

3d. Formula (h) may be integrated when  $m$  is positive and  $r^2 = \frac{b^2 - 4ac}{4c^2} > 0$ ; for, let  $x + \frac{b}{2c} = r \sec \theta$ ;  $\therefore dx = \frac{r \sin \theta d\theta}{\cos^2 \theta}$ , and  $\left[\left(x + \frac{b}{2c}\right)^2 - \frac{b^2 - 4ac}{4c^2}\right]^{\frac{n}{2}} = r^n \tan^n \theta$ . Substituting, we have,

$$u = r^{n+m+1} \sqrt{c^n} \int \left[ \sec \theta - \frac{b}{2cr} \right]^m \frac{\tan^{n+1} \theta d\theta}{\cos \theta} \quad \dots (29)$$

which is real when  $c$  is positive, and depends upon (a) in the same manner as (27) and (28).

4th. Formula (k) may be integrated when  $m$  is negative, and  $r^2 = \frac{b^2 - 4ac}{4a^2} > 0$ ; for, let  $\left(x^{-1} + \frac{b}{2a}\right) = r \sec \theta$ ;  $\therefore -\frac{dx}{x^2} = \frac{r \sin \theta d\theta}{\cos^2 \theta}$  and  $\left[\left(x^{-1} + \frac{b}{2c}\right)^2 - \frac{b^2 - 4ac}{4a^2}\right]^{\frac{n}{2}} = r^n \tan^n \theta$ . Substituting, we have,

$$u = -r^{-m-1} \sqrt{a^n} \int \left[ \sec \theta - \frac{b}{2ar} \right]^{-(m+n+2)} \frac{\tan^{n+1} \theta d\theta}{\cos \theta} \quad \dots (30)$$

which is real when  $a$  is positive, and it is integrable when we render (as previously)  $-(m+n+2) > 0$ .

5th. Formula (h) may be integrated when  $m$  is positive and  $r^2 = -\frac{b^2 - 4ac}{4c^2} > 0$ ; for, let  $x + \frac{b}{2c} = r \tan \theta$ ;  $\therefore dx = \frac{r d\theta}{\cos^2 \theta}$ . Substitute, and we have,

$$u = r^{m+1} \sqrt{c^2} \int \left[ \tan \theta - \frac{b}{2cr} \right]^m \frac{\sec^2 \theta d\theta}{\cos^2 \theta} \quad . \quad . \quad . \quad (31)$$

6th. Formula (k) may be integrated when  $m$  is negative and  $r^2 = -\frac{b^2 - 4ac}{4a^2} > 0$ ; for let  $x^{-1} + \frac{b}{4a} = r \tan \theta$ ;  $\therefore -\frac{dx}{x^2} = \frac{r d\theta}{\cos^2 \theta}$ . Substitute, and we have,

$$u = -r^{m+1} \sqrt{a^2} \int \left[ \tan \theta - \frac{b}{2ar} \right]^{-(m+n+1)} \frac{\sec^2 \theta d\theta}{\cos^2 \theta} \quad . \quad . \quad (32)$$

### SUMMARY.

$$u = \int (a + bx + cx^2)^{\frac{n}{2}} x^m dx \quad . \quad . \quad . \quad . \quad . \quad . \quad (b)$$

If  $x + \frac{b}{2c} = r \sin \theta$ ,

$$u = r^{m+n+1} \sqrt{-c^2} \int \left[ \sin \theta - \frac{b}{2cr} \right]^m \cos^{n+1} \theta d\theta \quad . \quad . \quad . \quad (27)$$

If  $x^{-1} + \frac{b}{2a} = r \sin \theta$ ,

$$u = -\frac{\sqrt{-a^2}}{r^{m+1}} \int \left[ \sin \theta - \frac{b}{2ar} \right]^{-(m+n+1)} \cos^{n+1} \theta d\theta \quad . \quad . \quad (28)$$

If  $x + \frac{b}{2c} = r \sec \theta$ ,

$$u = r^{m+n+1} \sqrt{c^2} \int \left[ \frac{1}{\cos \theta} - \frac{b}{2cr} \right]^m \frac{\sin^{n+1} \theta d\theta}{\cos^{n+2} \theta} \quad . \quad . \quad . \quad (29)$$

If  $x^{-1} + \frac{b}{2a} = r \sec \theta$ ,

$$u = -\frac{\sqrt{a^2}}{r^{m+1}} \int \left[ \frac{1}{\cos \theta} - \frac{b}{2ar} \right]^{-(m+n+1)} \frac{\sin^{n+1} \theta d\theta}{\cos^{n+2} \theta} \quad . \quad . \quad . \quad (30)$$

If  $x + \frac{b}{2c} = r \tan \theta$ ,

$$u = r^{m+n+1} \sqrt{c^2} \int \left[ \frac{\sin \theta}{\cos \theta} - \frac{b}{2cr} \right]^m \frac{d\theta}{\cos^{n+2} \theta} \quad . \quad . \quad . \quad . \quad (31)$$

If  $x^{-1} + \frac{b}{2a} = r \tan \theta$ ,

$$u = -\frac{\sqrt{a^2}}{r^{m+1}} \int \left[ \frac{\sin \theta}{\cos \theta} - \frac{b}{2ar} \right]^{-(m+n+1)} \frac{d\theta}{\cos^{n+2} \theta} \quad . \quad . \quad . \quad . \quad (32)$$

## EXAMPLES.

$$1. \int (a + bx + cx^2)^{\frac{p}{2}} (h + kx)^q dx.$$

In this let  $h + kx = x^1$ ; then the integral will be of the form (b), if  $p$  and  $q$  are integers.

$$2. \int (a + bx)^{\frac{p}{2}} (h + kx)^{\frac{q}{2}} x^m dx$$

$$= \int [(a + bx)(h + kx)]^{\frac{p}{2}} (h + kx)^{\frac{q-p}{2}} x^m dx, \text{ when } \frac{q-p}{2} > 0;$$

or,

$$= \int [(a + bx)(h + kx)^{\frac{q}{2}} (a + bx)^{\frac{p-q}{2}} x^m dx, \text{ when } \frac{p-q}{2} > 0.$$

Expand the binomial to the power  $\pm \frac{p-q}{2}$ . Since that is a positive integer, multiply and integrate the several terms each of the form (b).

3.  $\int (a + cx^2)^{\frac{p}{2}} (h + ex^2)^{\frac{q}{2}} x^m dx$  may, in many cases, be transformed into (a) either by making  $(a + cx^2) = r^2 \tan^2 \theta$  and  $r^2 = -\frac{1}{h} (ah - ce)$  or  $(ax^{-2} + c) = r^2 \tan^2 \theta$  and  $r^2 = \frac{1}{e} (ah - ce)$ . A full discussion of this form might be made, similar in nature to the discussion of form (b).

$$4. \int \frac{(1 + cx^2)x^{p+q-1} dx}{(1 - cx^2)^q (1 + ax^2 + c^2x^4)^{\frac{p}{2}}} = \int \frac{(x^{-2} + c) dx}{(x^{-1} - cx)^q [(x^{-1} - cx)^2 + a + 2c]^{\frac{p}{2}}}.$$

In this let  $(x^{-1} + cx) = r \tan \theta$  and  $r^2 = a + 2c$ .

$$5. \int \frac{(b + ex^2 + bc^2x^4)x^{p-1} dx}{(1 - c^2x^4)(1 + ax^2 + c^2x^4)^{\frac{p}{2}}}$$

$$= \frac{2bc + e}{4c} \int \frac{(1 + cx^2)x^{p-1} dx}{(1 - cx^2)(1 + ax^2 + c^2x^4)^{\frac{p}{2}}} + \frac{2bc - e}{4c} \int \frac{(1 - cx^2)x^{p-1} dx}{(1 + cx^2)(1 + ax^2 + c^2x^4)^{\frac{p}{2}}}$$

which is a case of Example 4.

It may be stated, in conclusion, that the method herein briefly sketched, by which integrals containing some power of the square root of a quadratic are transformed and made to depend on form (a), has been found by the author, in practice, to be practicable, expeditious and useful, especially when a proper transformation of limits is effected at the same time as the first-mentioned transformation.

NOTE A.

The following tables of relations between circular functions will facilitate the necessary transformations.

TABLE I.

*Relations between the Direct Circular Functions.*

$\sin\theta$	$= \sqrt{1-\cos^2\theta}$	$= \frac{\text{tang}\theta}{\sqrt{1+\text{tang}^2\theta}}$	$= \frac{1}{\sqrt{1+\cot^2\theta}}$	$= \frac{\sqrt{\sec^2\theta-1}}{\sec\theta}$	$= \frac{1}{\text{cosec}\theta}$
$\sqrt{1-\sin^2\theta}$	$= \cos\theta$	$= \frac{1}{\sqrt{1+\text{tang}^2\theta}}$	$= \frac{\cot\theta}{\sqrt{1+\cot^2\theta}}$	$= \frac{1}{\sec\theta}$	$= \frac{\sqrt{\text{cosec}^2\theta-1}}{\text{cosec}\theta}$
$\frac{\sin\theta}{\sqrt{1-\sin^2\theta}}$	$= \frac{\sqrt{1-\cos^2\theta}}{\cos\theta}$	$= \text{tang}\theta$	$= \frac{1}{\cot\theta}$	$= \sqrt{\sec^2\theta-1}$	$= \frac{1}{\sqrt{\text{cosec}^2\theta-1}}$
$\frac{\sqrt{1-\sin^2\theta}}{\sin\theta}$	$= \frac{\cos\theta}{\sqrt{1-\cos^2\theta}}$	$= \frac{1}{\text{tang}\theta}$	$= \cot\theta$	$= \frac{1}{\sqrt{\sec^2\theta-1}}$	$= \sqrt{\text{cosec}^2\theta-1}$
$\frac{1}{\sqrt{1-\sin^2\theta}}$	$= \frac{1}{\cos\theta}$	$= \sqrt{1+\text{tang}^2\theta}$	$= \frac{\sqrt{1+\cot^2\theta}}{\cot\theta}$	$= \sec\theta$	$= \frac{\text{cosec}\theta}{\sqrt{\text{cosec}^2\theta-1}}$
$\frac{1}{\sin\theta}$	$= \frac{1}{\sqrt{1-\cos^2\theta}}$	$= \frac{\sqrt{1+\text{tang}^2\theta}}{\text{tang}\theta}$	$= \sqrt{1+\cot^2\theta}$	$= \frac{\sec\theta}{\sqrt{\sec^2\theta-1}}$	$= \text{cosec}\theta$

TABLE II.

*Relations between the Inverse Circular Functions.*

$\sin^{-1}x$	$= \cos^{-1}\sqrt{1-x^2}$	$= \text{tang}^{-1} \frac{x}{\sqrt{1-x^2}}$	$= \cot^{-1} \frac{\sqrt{1-x^2}}{x}$	$= \sec^{-1} \frac{1}{\sqrt{1-x^2}}$	$= \text{cosec}^{-1} \frac{1}{x}$
$\cos^{-1}\sqrt{1-x^2}$	$= \sin^{-1}x$	$= \text{tang}^{-1} \frac{\sqrt{1-x^2}}{x}$	$= \cot^{-1} \frac{x}{\sqrt{1-x^2}}$	$= \sec^{-1} \frac{1}{x}$	$= \text{cosec}^{-1} \frac{1}{\sqrt{1-x^2}}$
$\sin^{-1} \frac{x}{\sqrt{1+x^2}}$	$= \cos^{-1} \frac{1}{\sqrt{1+x^2}}$	$= \text{tang}^{-1}x$	$= \cot^{-1} \frac{1}{x}$	$= \sec^{-1}\sqrt{1+x^2}$	$= \text{cosec}^{-1} \frac{\sqrt{1+x^2}}{x}$
$\cos^{-1} \frac{1}{\sqrt{1+x^2}}$	$= \sin^{-1} \frac{x}{\sqrt{1+x^2}}$	$= \text{tang}^{-1} \frac{1}{x}$	$= \cot^{-1}x$	$= \sec^{-1} \frac{\sqrt{1+x^2}}{x}$	$= \text{cosec}^{-1}\sqrt{1+x^2}$
$\sin^{-1} \frac{\sqrt{x^2-1}}{x}$	$= \cos^{-1} \frac{1}{x}$	$= \text{tang}^{-1}\sqrt{x^2-1}$	$= \cot^{-1} \frac{1}{\sqrt{x^2-1}}$	$= \sec^{-1}x$	$= \text{cosec}^{-1} \frac{x}{\sqrt{x^2-1}}$
$\cos^{-1} \frac{1}{x}$	$= \sin^{-1} \frac{\sqrt{x^2-1}}{x}$	$= \text{tang}^{-1} \frac{1}{\sqrt{x^2-1}}$	$= \cot^{-1}\sqrt{x^2-1}$	$= \sec^{-1} \frac{x}{\sqrt{x^2-1}}$	$= \text{cosec}^{-1}x$

## NOTE B.

The symmetrical manner in which formulæ (1) to (6), inclusive, are obtained may be further shown by the following process of obtaining the ordinary reduction formulæ for the form,

$$\int X^p x^{m-1} dx \dots \dots \dots (b^1)$$

in which  $X = a + bx^n$ . Integrating by parts, the parts being indicated by the period,

$$\int X^p \cdot x^{m-1} dx = \frac{X^p x^m}{m} - \frac{bnp}{m} \int X^{p-1} x^{m+n-1} dx \dots \dots \dots (1)$$

or,

$$\int x^{m-n} \cdot X x^{n-1} dx = \frac{X^{p+1} x^{m-n}}{bn(p+1)} - \frac{m-n}{bn(p+1)} \int X^{p+1} x^{m-n-1} dx \dots (2)$$

It is to be noticed that (1) and (2) are the *only* integrations by parts of  $(b^1)$  which are *binomials*. Again, we have identically by separation,

$$\int X^p x^{m-1} dx = a \int X^{p-1} x^{m-1} dx + b \int X^{p-1} x^{m+n-1} dx \dots (s^1)$$

$$\int X^{p+1} x^{m-1} dx = a \int X^p x^{m-1} dx + b \int X^p x^{m+n-1} dx \dots (s)$$

$$\int X^{p+1} x^{m-n-1} dx = a \int X^p x^{m-n-1} dx + b \int X^p x^{m-1} dx \dots (s_1)$$

It is to be noticed that  $(s^1)$ ,  $(s)$ , and  $(s_1)$  are the *only* separations of  $(b^1)$  which are *binomials*.

If now the last term of  $(s^1)$  be integrated by parts in the same manner as (2), we shall obtain (5) of the following summary, after solving for  $(b^1)$ .

If the last term of  $(s)$  be integrated by parts similarly to (2), we shall obtain (4).

If the first term of  $(s)$  be integrated by parts similarly to (1), we shall obtain (3).

If the first term of  $(s_1)$  be integrated by parts similarly to (1), we shall obtain (6).

It is to be noticed that (3), (4), (5), and (6) are the *only* integrations by parts of  $(s^1)$ ,  $(s)$ , and  $(s_1)$  which are *binomials*.

## SUMMARY.

$$\int X^p x^{m-1} dx \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (b^1)$$

$$= \frac{X^p x^m}{m} - \frac{bnp}{m} \int X^{p-1} x^{m+n-1} dx \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (1)$$

$$= \frac{X^{p+1} x^{m-n}}{bn(p+1)} - \frac{m-n}{bn(p+1)} \int X^{p+1} x^{m-n-1} dx \quad . \quad . \quad . \quad (2)$$

$$= \frac{X^{p+1} x^m}{am} - \frac{b(m+n+np)}{am} \int X^p x^{m+n-1} dx \quad . \quad . \quad . \quad (3)$$

$$= \frac{-X^{p+1} x^m}{an(p+1)} + \frac{m+n+np}{an(p+1)} \int X^{p+1} x^{m-1} dx \quad . \quad . \quad . \quad (4)$$

$$= \frac{X^p x^m}{m+np} + \frac{anp}{m+np} \int X^{p-1} x^{m-1} dx \quad . \quad . \quad . \quad . \quad (5)$$

$$= \frac{X^{p+1} x^{m-n}}{b(m+np)} - \frac{a(m-n)}{b(m+np)} \int X^p x^{m-n-1} dx \quad . \quad . \quad . \quad (6)$$





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## ERRATA.

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Page 74, for "Lucien M. Osborne," read "Lucien M. Osborn," and for "George N. Arnold," read "George F. Arnold."

Page 76, line 15, for "Doctor of Philosophy," read "Doctor of Philology;" line 18, for "S. A. Thomas," read "G. A. Thomas."

Page 80, 11th line from foot of page, for "E. A. Waffle," read "A. E. Waffle;" 8th line from foot, strike out "The prize for best Greek examination was awarded to Ceylon H. Lewis;" 4th line from foot, for "was," read "were."

Page 81, line 18, for "οἶδ'," read "οἶδ'"; line 25, for "ὧς," read "ὧς;" 4th line from foot, for "ἀρρωξ," read "ἀρρωξ."

Page 82, line 3, for "ἐγένετο," read "ἐγένετο;" line 9, for "φρονεῖν," read "φρονεῖν;" 3d line from foot, for "Φερσεφασσ'," read "Φερσέφασσ'."

Page 84, line 12, for "dubuimst," read "dubiumst;" line 22, for "spatum," read "spatium."

Page 88, line 22, for "Trover," read "Trevor."

Page 387, line 5, column 4, for "84," read "83."

Page 456, last column, line 12, for "191.00," read "171.00."





# STATE OF NEW YORK.

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No. 29.

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## IN ASSEMBLY,

January 30, 1873.

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### LIST OF GENERAL ORDERS.

G. O.

39. An act to provide for the release of the dower interest of married women who are insane or under other disability.
40. An act to provide for the construction and improvement of the road from Piseco lake to Claflin's tannery, in the county of Hamilton.
41. An act to make an appropriation to construct a highway from John Peck's, in the town of Johnstown, county of Fulton, to Pine Lake post-office, in the town of Caroga, in same county.
42. (Senate) An act to authorize the commissioner of quarantine to purchase a steamboat for the use of the quarantine establishment of the port of New York, and make an appropriation therefor.
43. An act to incorporate the Guilderland Mutual Insurance Association, and for other purposes.
44. An act to amend the charter of the Arctic Fire Insurance Company, in the city of New York.
45. An act to provide for heating and ventilating the Assembly chamber.
46. An act in relation of bridges in the town of Ausable, in Clinton county, and town of Chesterfield, in Essex county.
47. An act relative to paving streets and constructing sewers in the village of West Troy.

a. d.

48. An act to authorize the village of Saugerties, in the county of Ulster, to purchase a steam fire engine, etc.
49. An act to amend an act entitled "An act to establish and amend the charter of the village of Deposit," passed March 2, 1858, and the acts amendatory thereto.
50. An act to amend an act entitled "An act to organize and establish a police for the village of West Troy," passed April 28, 1870, and to amend an act entitled "An act to amend an act entitled 'An act to organize and establish a police for the village of West Troy,' passed April 6, 1871."
51. An act to amend an act entitled "An act to provide for the incorporation of villages," passed December 7, 1847, and acts amendatory thereof, so far as relates to the village of Niagara Falls.
52. An act to amend the charter of the village of Akron, in the county of Erie, and to extend the limits of said village.
53. An act to equalize representation in the board of supervisors of Fulton county.
54. An act to release the interest of the people of the State of New York in certain real estate to Henry Fisher.
55. An act to release the interest of the people of the State of New York in certain real estate to Thomas Shedd, John Shedd and William Shedd.
56. An act to amend sections 11 and 13 of article 1, title 1, chapter 8, part 2, of the Revised Statutes, entitled "Of marriage and of the solemnization and proof thereof."
57. An act to release the interest of the people of the State in certain real estate in the city of Brooklyn to Charles Ferber.
58. An act to prevent the careless use of fire-arms.
59. An act conferring certain additional powers upon the Comptroller.
60. An act to incorporate the Central Trust Company of New York.
61. An act to regulate pay of the firemen of the city of New York.
62. An act to amend title 7, entitled "Of the Board of Education," of an act entitled "An act revising the charter of the city of Oswego," passed April 16, 1860.

G. O.

63. (Senate) An act to authorize the city of Rome to borrow money.
64. An act to amend an act entitled "An act to establish a police department in and for the city of Brooklyn, and to define its powers and duties," passed April 5, 1870, and the acts amendatory thereof passed March 28, 1871, and April 25, 1872.
65. An act requiring commissions of highways to give notice of the discontinuance of public highways.
66. An act in relation to the tolls upon the Western Plank-road Company, and extending thereto the provisions of chapter 604 of the Laws of 1853 thereto.
67. An act to authorize the Lockport and Cambria Plank-road Company to collect certain additional tolls.
68. An act to amend an act entitled "An act to authorize the appointment of commissions to fix the grade and improve sidewalks, and open and improve streets in the town of New Lots, Kings county," passed April 24, 1872, and known as chapter 359, Laws of 1872.
69. An act relative to the widening, straightening, opening and grading of One Hundred and Sixty-seventh street, in the town of Morrisania, in the county of Westchester.
70. An act to incorporate the Kingston Water-works Company.
71. An act to incorporate the Ticonderoga Water-works Company.
72. An act to amend chapter 809 of the Laws of 1872, entitled "An act to authorize the construction of sewer in the county of Kings, from the county buildings at Flatbush, in said county," passed May 21, 1872.
73. An act to amend an act entitled "An act for the completion of Westchester avenue, in the towns of White Plains, Harrison and Rye, in the county of Westchester," passed May 13, 1872.
74. An act relative to the improvement of the town of Kingsbridge, in the county of Westchester."
75. An act to provide for the laying out, improvement and preservation of burial grounds in the several towns of the State.
76. An act to amend the charter of the Mechanics' Savings Bank of Rochester.

**G. O.**

- 77. An act to incorporate the Mechanics' Savings Bank of Cohoes, Albany county, New York.**
- 78. An act to authorize "The Remington Empire Sewing Machine Company" to change its corporate name.**
- 79. An act in relation to private asylums for the insane.**
- 80. An act for the preservation of the timber and stone on the Onondaga Indian reservation.**

# STATE OF NEW YORK.

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No. 30.

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## IN ASSEMBLY,

January 31, 1873.

---

### REPORT

#### OF COMMITTEE ON PUBLIC HEALTH, ON THE SUBJECT OF VENTILATION OF THE ASSEMBLY CHAMBER.

The committee on public health, to whom was referred a resolution concerning the better ventilation of the Assembly Chamber, in the words following:

STATE OF NEW YORK:

ASSEMBLY CHAMBER,  
ALBANY, *January 17, 1873.* }

On motion of Mr. Hendee,

*Resolved*, That the committee on public health be requested to examine, at an early day, into the causes of ill ventilation of this Chamber, and to report to the House such measures as they may deem best to remedy the evil.

By order.

J. O'DONNELL, *Clerk.*

Beg leave to report,

That they have carefully examined the matters set forth in the resolution, and find,

*First.* That there can be no satisfactory ventilation of the Assembly Chamber so long as the present heating process is continued. For we find unavoidable surrounding conditions, together with defective construction of heating apparatus, and the dilapidated condition of the same, all of which contribute to the state of bad air

found to exist in the Chamber. Carbonic acid gas, carbonic oxide, together with other noxious gases and vile odors from the basement, cellars and sinks of the Capitol building, are transmitted to the flues and through the passages connecting with the Assembly Chamber, and hence we see that in no way but by abating the source of this effluvia may we expect to obtain relief; rendering, as it does, the atmosphere of the Chamber absolutely unfit for use and dangerous in the extreme to the health of the occupants, which the painful history of the mortality of preceding sessions, and especially the last one, fully attest.

*Second.* That in order to the proper ventilation of the Chamber, containing, as it does, a very small number of cubic feet per capita of those occupying it, it is necessary that the whole volume of air be changed at least every five or eight minutes, under the galleries and in remote corners, as well as in the center of the room. In our opinion this frequency of change is necessary for the prevention of those zymotic diseases having their origin in exhalations of overcrowded audience rooms, irrespective of the dangers set forth in the first subdivision of this report. To most effectually obtain the above conditions, your committee have conferred with different parties touching plans, estimates and security against frauds, or, in *common parlance*, "*humbuggery*."

Your committee, therefore desire, out of the many recommendations from gentlemen of eminence, which have been placed in their hands, all of which must be regarded as good authority, to present a few, which are herewith submitted and embodied in this report and made a part thereof, viz.:

Professor Anthon, of "Anthon's Grammar School," of New York, says:

(Copy.)

ANTHON GRAMMAR SCHOOL,  
252 MADISON AVENUE, NEW YORK, }  
January 11, 1872.

In October, 1871, Mr. Henry A. Gouge was directed by me to introduce his system of ventilation into the buildings now occupied by this school.

He was not limited as to expense, nor interfered with in any way, and the result is all that I could desire. I can discover no difference between the air in the halls and that in the rooms where classes of thirty boys have been sitting with closed doors for an hour or more.

Mr. Gouge put in three distinct shafts, each carrying off the foul

air from four rooms. About four hundred cubic feet a minute is discharged from each room. I hear no more complaints of headache from my pupils, and see no flushed faces when I enter the class-rooms. The boys work with more vigor, and my twelve teachers and one hundred and fifty pupils are unanimous in the expression of their satisfaction.

Prior to my becoming acquainted with Mr. Gouge's system, I was in favor of that of the late Mr. David B. Reid, who gave a course of lectures on ventilation in my school in the year 1855, and furnished me with a plan of ventilation for my school, which I carried out with poor results. But, in my opinion, his system will not compare in efficiency with that of Mr. Gouge.

I give this statement cheerfully to Mr. Gouge, and hope that it may be of use to him when he arrives at London.

GEO. C. ANTHON.

Prof. Dwight, of Columbia Law School, says:

(Copy.)

COLUMBIA COLLEGE LAW SCHOOL,  
37 LAFAYETTE PLACE, NEW YORK, }  
January 16, 1872.

MY DEAR SIR.—I take pleasure in stating my views of the ventilating apparatus placed by you in the building occupied by this law school.

Our building is not very well adapted to our purposes, and our principal lecture room crowded with students.

When your ventilator is not in operation, I perceive it in my own feelings at once. The air is oppressive, and there is a general languor about me. The students perceptibly lose their interest in the exercises.

When the ventilator is in full operation, with a connection with the outer air, all is changed. I would not be without it in winter for any consideration. It is not so essential in summer, as we have good ventilation by three large windows.

I hope you will prosper as you deserve in your most useful work.

Yours, sincerely,

THEODORE M. DWIGHT,

*Professor of Law, etc.*

In view of these facts and circumstances which have been developed by the investigations of your committee, they are of the opinion that the Assembly Chamber should be warmed by steam distributed through the room by pipes and radiators, allowing the present hot-air apparatus to be used only until steam, with the most modern improvements for safety and efficiency, can be introduced. And



furthermore, that the system of ventilation invented by Prof. H. A. Gouge, referred to by Profs. Anthon and Dwight, should be adopted, providing the whole expense thereof for both heating and ventilation shall not exceed the sum of \$12,000; and that a guaranty be made to the House that a suitable temperature for the comfort of members shall be sustained, while at the same time a complete change of the entire atmosphere of the Chamber be effected once every five to eight minutes during the use of the same, or no compensation shall be allowed therefor.

Your committee beg leave to report the following bill, and ask its early consideration.

All of which is respectfully submitted.

WM. W. CRANDALL,  
HORATIO S. HENDEE,  
JACOB M. PATTERSON, JR.,  
JAMES WATT,  
JOHN B. HILLYER,  
JAMES G. PORTEOUS,  
FREDERICK COCHUE,  
CHARLES G. CORNELL,  
WILLIAM VOORHIS,

*Com. on Public Health.*

# STATE OF NEW YORK.

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No. 31.

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## IN ASSEMBLY,

January 31, 1873.

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### LIST OF GENERAL ORDERS.

G. O.

81. An act to regulate the administration of estates held in trust for idiots, lunatics and persons of unsound mind and incapable of managing their affairs.
82. An act to amend an act entitled "An act to vest in the board of supervisors certain legislative powers, and to prescribe their fees for certain services," passed April 3, 1849.
83. An act in relation to the city court of Yonkers.
84. An act to amend an act entitled "An act to incorporate the Commercial Warehouse Company, of New York," passed April 13, 1867.
85. An act to provide for a supply of water in the city of Yonkers
86. An act to authorize the common council of the city of Lockport to raise by tax necessary means to repair the Hydrant Hose carriage-house in the fourth ward of said city.
87. An act to authorize the common council of the city of Buffalo to borrow money and purchase additional fire engines and fire apparatus.
88. An act to provide means and facilities for transporting on the Erie canal, during each season, six million bushels of grain at a fixed price, from Buffalo to Oswego and to the city of New York, and to aid the introduction and application of steam power for towing purposes on the canal.

G. O.

89. An act to amend an act entitled "An act to incorporate the Lewiston Suspension Bridge Company," passed March 28, 1849.
90. An act to confer additional powers upon the New York and Canada Railroad Company.
91. An act relative to the Washington Street and State Asylum Railroad Company.
92. An act to amend the charter of the Harlem River and Port Chester Railroad Company.
93. An act to incorporate the Long Island City and Maspeth Railway Company.
94. An act to amend an act entitled "An act to supply the village of Warren, in the county of Rockland, with pure and wholesome water," passed May 10, 1872.
95. An act to amend an act entitled "An act in relation to the village of Chatham, in Columbia county," passed April 27, 1870.
96. An act to confirm and legalize the official acts of the president and board of trustees and the assessors of the village of Fort Plain, in the county of Montgomery, during the year 1872, in regard to assessments and collection of taxes and disbursements of moneys.
97. An act to incorporate the Nyack Water-works Company.
98. An act to supply the village of Cortland with pure and wholesome water.
99. An act to define and establish the boundaries of school district No. 5 of the town of Flushing, Queens county, to provide for the purchase of a new school-house thereon, and for the sale of the present school-house and site in said school district.
100. An act to enable the supervisors of the county of Tioga to convey title of the old county clerk's office, and the land on which it is built, to the school commissioners of the union schools of the village of Owego.
101. An act to amend section 4 of article 3, of title 3 of part 1, of the Revised Statutes.
102. An act to authorize the sale and conveyance of a portion of the real estate belonging to school district No. 1 of the town of Lansingburgh.

G. O.

- 103. An act to reduce the number comprising the board of education of union school district No. 2 of the town of Ellington, county of Chautauqua.
- 104. (Senate) An act to release the interest of the people of the State of New York in certain real estate of which Robert Davis, late of Hanover, Chautauqua county, died siezed, to Leroy.
- 105. An act in relation to the division of the town of Yonkers.



# STATE OF NEW YORK.

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No. 32.

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## IN ASSEMBLY,

February 3, 1873.

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### ANNUAL REPORT

OF THE SECRETARY OF STATE IN RELATION TO THE  
STATISTICS OF THE POOR.

STATE OF NEW YORK:

DEPARTMENT OF SECRETARY OF STATE,

ALBANY, *February 3, 1873.* }

Hon. ALONZO B. CORNELL,

*Speaker of the Assembly :*

SIR.—I have the honor to herewith transmit to the Legislature my annual report of the statistics of pauperism, compiled from the returns made from the several counties of the State, for the year ending December 1, 1872. I am, respectfully,

Your obedient servant,

G. HILTON SCRIBNER,

*Secretary of State.*



# REPORT.

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STATE OF NEW YORK:

OFFICE OF THE SECRETARY OF STATE, }  
ALBANY, *January 31, 1873.* }

*To the Honorable the Legislature:*

In compliance with the requirements of law, I hereby transmit a report and abstract of returns made to this Department by the superintendents of the poor of the several counties of the State, or other officers required to make such annual returns.

The report contains statistics of the poor, generally very complete, from the several counties of the State, except Herkimer, Montgomery, Putnam, Rensselaer and Yates, from which no returns have been received. In accordance with the law, in case of such neglect of duty, I have notified the district attorneys of said counties of the failure of the keeper of the alms-house of Putnam county, and of the superintendents of the poor of the remaining above-named counties, to comply with the provisions of chapter 214, Laws of 1842, as amended by chapter 100, Laws of 1849.

Although ample notification has been given of the time at which such reports are due at this Department, there has been, during my term of office, considerable difficulty in obtaining the returns from some counties as promptly as is desirable and required by law.

Respectfully submitted.

G. HILTON SCRIBNER,  
*Secretary of State.*

## SYNOPSIS.

Whole number of paupers relieved during the year ending December 1, 1872, was.....	132,515
Whole expense for the support of the poor of the State during the same period was .....	\$2,404,745 67
Amount expended during the past year for temporary relief was .....	801,524 45



Expenses connected with the county poor-houses during the past year was.....	\$1,603,221 22
Value of pauper labor during the year was.....	26,554 95
Amount saved by pauper labor was .....	32,703 15
Average sum expended (above the earnings of paupers) for support of each was.....	68.92 $\frac{8}{5}$
The average weekly expense for the support of each person was.....	1.37 $\frac{1}{2}$
The number of children under sixteen years of age in the poor-houses on the first day of November last was .....	
The number of children reported to have received instruction during the year was .....	
Average time, in months, of instruction.....	

Of the persons relieved and supported during the year, 189 pauper insane (lunatics) were transported to the Willard Asylum for the Insane, at Ovid, and supported by the counties, of whom there were :

Males .....	91
Females .....	98
Total .....	189

Table "A" exhibits the whole number of town and county paupers relieved and supported during the year ending December 1, 1872, and the amount expended for their support, to wit :

Whole number relieved, etc.....	132,515
Of which there were county paupers .....	104,258
Of which there were town paupers.....	28,257
Temporarily relieved.....	77,039
Expenses connected with county poor-houses.....	\$1,603,221 22
Expenses of administering temporary relief.....	801,524 45

Table "B" shows the subjoined analysis of the expenses connected with the county poor-houses, to wit :

Amount paid to superintendents for services.....	\$103,297 49
Amount paid to keepers and poor-house officers....	243,856 53
Amount paid to constables and other officers .....	5,332 00
Amount paid for supplies .....	1,033,609 90
Amount paid for transportation of paupers.....	16,502 17
Amount paid to physicians for attendance and medicine.....	71,543 92
Amount paid for repairs and improvement of buildings.....	71,928 13
Amount paid for miscellaneous expenditures.....	57,151 09
	<u>\$1,603,221 22</u>

Table "C" gives the following expenditures for temporary relief:

Amount paid overseers of the poor.....	\$74,850 00
Amount paid justices of the peace .....	2,562 25
Amount paid for relief of poor (temporarily) .....	724,112 20
	<hr/>
	\$801,524 45
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Table "D" shows the value of poor-house establishments, labor of paupers, and expense of supporting each person:

Whole number of acres attached to poor-house establishments .....	7,526 $\frac{1}{2}$
Present estimated value of poor-house establishments in the State.....	\$3,148,751 00
First cost of same.....	1,173,233 48
	<hr/>
Increase in value .....	\$1,975,517 52
	<hr/>
Amount saved by pauper labor .....	\$32,703 15
Value of labor of paupers .....	26,554 95
Average sum expended above the earnings of paupers for the support of each .....	68.92 $\frac{8}{3}$
Average weekly expense of each pauper.....	1.37 $\frac{1}{2}$
	<hr/>

Table "E" gives the description of persons relieved and supported, and changes during the year:

Whole number received in the poor-houses .....	48,469
Born in the poor-houses.....	975
Died .....	1,540
Bound out .....	377
Discharged .....	39,322
Absconded.....	457
On the first day of December, 1872, there remained in the poor-houses .....	14,310
Of which there were males.....	7,512
Of which there were females .....	6,798
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Of those remaining on the 1st day of December, there were:

Foreigners .....	7,785
Born in the United States.....	6,525
Lunatics .....	3,395
Idiots.....	511
Blind .....	289
Mutes .....	48
	<hr/>

Of the persons relieved or supported during the year, there were :

Foreigners .....	85,528
Born in the United States.....	46,027
Lunatics .....	5,583
Idiots .....	766
Blind .....	679
Mutes .....	100

Table "F" contains the number of children in the poor-houses under sixteen years of age, and the number instructed during the year :

Females under sixteen years of age.....	877
Males under sixteen years of age.....	1,199
Total.....	2,076

Number of children instructed during the year .....	1,345
Average time of instruction (months) .....	8 $\frac{5}{31}$

Table "G" shows the nativity of paupers, to wit:

	Males.	Females.	Total.
United States .....	24,533	21,434	45,967
Ireland .....	26,051	22,984	49,035
England .....	3,601	2,574	6,175
Scotland.....	828	596	1,424
Germany .....	11,184	8,696	19,880
France .....	723	465	1,188
Canada.....	1,474	1,386	2,860
Italy .....	28	18	46
Sweden.....	101	41	142
Spain .....	3	2	5
Prussia .....	48	26	74
Denmark .....	3	2	5
Holland .....	50	25	75
Switzerland .....	33	11	44
Poland .....	13	3	16
Austria.....	5	....	5
India.....	1	1	2
Belgium .....	5	3	8
Wales .....	75	52	127
Russia .....	4	....	4
Norway .....	1	1	2
Nova Scotia.....	1	1	2
Asia .....	1	....	1
Africa.....	3	4	7

	Males.	Females.	Total.
West Indies.....	11	....	11
Not reported.....	2,095	2,355	4,450
Total.....	<u>70,875</u>	<u>60,680</u>	<u>131,555</u>
Richmond county (no special poor report).....			960
Total number of paupers .....			<u>132,515</u>

Table "H" gives the causes of pauperism, to wit:

	Males.	Females.	Total.
Intemperance, direct .....	14,693	8,261	22,954
Children having intemperate parents,	4,806	3,499	8,305
Females having intemperate husbands,	.....	2,369	2,369
Debauchery.....	777	1,891	2,668
Debauchery of parents .....	529	360	889
Idleness .....	1,058	630	1,688
Vagrancy.....	2,563	1,490	4,053
Idiocy.....	420	346	766
Lunacy.....	2,652	2,931	5,583
Blindness .....	416	263	679
Lameness .....	1,609	791	2,400
Sickness .....	16,549	11,064	27,613
Decrepitude.....	751	537	1,288
Old age .....	1,639	1,496	3,135
Deaf and dumb (mutes) .....	62	38	100
Indigent and destitute.....	14,780	14,950	29,730
Children having destitute parents...	3,170	2,680	5,850
Children having sick parents .....	635	679	1,314
Females having sick husbands .....	.....	1,644	1,644
Orphans .....	889	879	1,768
Bastards .....	193	213	406
Illegitimate children .....	228	113	341
Not reported.....	2,456	3,556	6,012
Total.....	<u>70,875</u>	<u>60,680</u>	<u>131,555</u>
Richmond county (no special poor report).....			960
Total number of paupers .....			<u>132,515</u>

(A.)

Whole number of Town and County Paupers relieved or supported during the year ending December 1, 1872, and amount expended for their support.

COUNTIES.	Whole number of paupers relieved or supported during the year ending December 1st, 1872.	Number of county paupers temporarily relieved or supported.	Number of town paupers relieved or supported.	Number of persons temporarily relieved.	Expenses connected with the county poor-houses.	Expenses of administering temporary relief.	Whole expense of support of county and town paupers for the year ending December 1st, 1872.
Albany	1,794	649	1,145	.....	\$26,000 00	.....	\$26,000 00
Allegany	1,248	248	.....	120	5,999 77	24,342 61	10,342 59
Broome	1,653	1,653	.....	1,435	8,869 79	12,270 13	21,139 92
Cattaraugus	1,350	1,121	229	1,209	6,148 23	6,246 01	12,394 24
Cayuga	1,781	1,061	720	1,438	11,611 84	19,416 83	31,028 66
Chautauqua	3,647	3,647	.....	3,292	10,804 41	17,537 12	28,341 53
Chemung	128	90	108	123	8,754 89	.....	8,754 89
Chenango	535	299	286	460	5,622 69	8,907 77	9,530 46
Clinton	1,512	239	1,273	882	5,619 66	20,432 88	26,052 54
Columbia	1,781	781	.....	.....	12,571 54	.....	12,571 54
Cortland	330	330	.....	192	8,600 40	.....	8,600 40
Delaware	427	163	364	276	4,497 12	8,296 00	11,867 44
Dutchess	292	892	.....	40	16,767 84	1,235 27	18,063 11
Erie	1,312	1,312	.....	7,430	56,014 94	84,179 82	140,194 26
Essex	1,390	92	398	260	5,082 90	2,746 71	8,889 61
Franklin	101	101	.....	407	4,929 76	5,560 83	10,490 59
Fulton	71	44	27	40	6,000 50	4,970 66	10,971 16
Genesee	1,129	810	319	727	4,128 98	2,823 06	7,017 03
Greene	1,185	952	233	894	5,402 47	1,703 60	7,106 07
Hamilton	19	11	8	7	1,667 00	1,118 00	1,785 08
Herkimer	.....	.....	.....	.....	.....	.....	.....
Jefferson	1,850	1,850	.....	1,506	12,100 33	26,867 27	49,467 60
Kings	31,053	31,053	.....	22,833	305,179 99	95,771 43	400,951 23
Lewis	167	121	66	98	7,232 90	2,136 94	10,369 84
Livingston	339	339	.....	150	14,547 04	2,423 39	17,970 43
Madison	643	543	.....	.....	12,780 00	.....	12,780 00
Monroe	4,350	1,300	2,960	3,520	18,671 94	84,043 16	102,714 40
Montgomery	40,244	61,206	6,420	4,450	714,970 56	104,061 04	819,031 60
New York	1,144,144	6,144	6,420	2,010	12,144 90	17,176 60	31,321 50

Oneida .....	4,723	.....	8,871	24,909 98	29,108 00	54,015 98
Onondaga .....	4,522	2,616	591	19,360 42	55,402 54	74,762 96
Ontario .....	1,150	.....	962	10,495 38	6,266 58	16,761 91
Orange .....	590	60	60	26,991 04	3,124 56	30,115 60
Orleans .....	776	.....	500	5,779 57	3,476 53	9,256 10
Oswego .....	169	.....	.....	11,065 40	13,894 07	24,959 47
Otsego .....	380	264	184	9,533 56	3,636 48	13,160 04
Putnam * .....	.....	.....	.....	.....	.....	.....
Queens .....	2,561	884	1,050	29,063 14	7,552 95	36,616 09
Rensselaer * .....	.....	.....	.....	.....	.....	.....
Richmond .....	960	.....	786	7,998 55	7,115 22	15,113 77
Rockland .....	850	54	600	8,610 42	4,702 81	8,313 23
Saratoga .....	256	.....	.....	12,103 71	.....	12,103 71
Schenectady .....	848	828	778	12,646 23	2,521 32	15,167 55
Schoharie .....	124	105	25	3,914 97	60 00	3,974 97
Schuyler .....	194	152	.....	2,723 32	7,953 55	10,676 87
Seneca .....	848	881	641	7,600 23	4,353 95	11,954 18
St. Lawrence .....	2,493	2,224	2,224	9,027 35	30,089 89	39,087 24
Steuben .....	1,286	2,708	401	8,728 72	10,573 23	19,301 94
Suffolk .....	594	566	.....	11,205 04	22,859 72	34,064 76
Sullivan .....	889	119	270	4,784 02	4,257 35	9,041 37
Tioga .....	821	731	582	4,972 69	7,070 50	12,043 19
Tompkins .....	613	282	613	3,242 28	6,448 92	9,691 20
Ulster .....	2,195	774	1,656	9,879 89	7,060 16	16,940 05
Warren .....	239	156	239	4,436 77	3,191 74	7,628 51
Washington .....	266	.....	.....	8,313 97	.....	8,313 97
Wayne .....	1,180	716	1,000	13,080 20	14,056 59	27,086 79
Westchester .....	1,677	63	63	22,709 15	1,443 75	24,152 90
Wyoming .....	1,195	109	130	4,559 39	2,679 91	7,249 30
Yates * .....	.....	.....	.....	.....	.....	.....
Total .....	132,515	28,257	77,039	\$1,603,221 23	\$801,524 45	\$2,404,745 67

\* No report.

+ Heads of families.

(B.)

Expenses connected with County Poor-houses.

COUNTIES.	Amount paid to superintendents for their services.	Amount paid keepers and poor-house officers.	Amount paid for con-stables and other officers.	Amount paid for supplies for the Co. poor-house.	Amount paid for the transportation of paupers.	Amount paid to physicians for attendance and medicines.	Amount paid for repairs and improvements of buildings and grounds.	Amount paid for miscellaneous expenditures connected with the poor-house.	Total.
Albany .....	\$2,500 00	\$4,200 00	.....	\$16,000 00	.....	\$3,000 00	\$300 00	.....	\$36,000 00
Allegany .....	.....	4,586 39	.....	4,700 19	\$35 00	125 00	455 19	\$98 00	5,999 77
Broome .....	1,002 00	1,456 00	.....	5,685 55	54 57	139 00	88 48	494 19	8,869 79
Cattaraugus .....	504 00	800 00	.....	2,896 09	52 82	187 36	871 52	886 44	6,148 23
Cayuga .....	951 00	1,272 00	.....	7,754 09	47 75	250 00	1,887 00	.....	11,611 84
Chautauque .....	1,206 46	1,556 00	.....	6,197 92	222 20	380 01	875 22	376 50	10,804 41
Chemung .....	150 00	1,600 00	.....	2,815 40	79 59	100 00	.....	9 90	3,754 89
Chenango .....	258 50	1,100 00	.....	3,768 80	43 75	292 62	159 02	.....	5,623 69
Columbia .....	535 31	1,790 00	.....	3,179 90	220 00	150 00	165 00	579 45	5,619 66
Cortland .....	1,171 00	.....	.....	10,324 11	144 39	480 49	383 91	117 64	12,571 54
Delaware .....	188 75	750 00	.....	2,841 65	35 00	150 00	110 00	25 00	3,600 40
Dutchess .....	275 00	600 00	\$15 75	3,078 14	191 88	206 10	.....	130 25	4,497 12
Dutchess .....	2,000 00	500 00	280 00	10,708 26	791 18	449 64	.....	2,043 66	16,767 84
Erie .....	1,000 00	6,200 00	.....	30,471 67	3,289 07	1,150 00	1,725 00	12,179 90	56,014 94
Essex .....	.....	900 00	.....	4,088 80	4 10	100 00	.....	.....	5,092 90
Franklin .....	500 00	500 00	.....	2,905 24	63 63	67 98	362 91	630 00	4,929 76
Fulton .....	1,500 00	250 50	50 00	3,000 00	.....	500 00	500 00	900 00	6,000 50
Genesee .....	300 00	1,287 42	.....	2,042 30	74 76	80 73	300 00	208 77	4,193 98
Greene .....	260 00	400 00	.....	4,562 47	.....	180 00	.....	.....	5,402 47
Hamilton .....	57 00	.....	.....	1,560 00	10 00	40 00	.....	.....	1,667 00
Herkimer .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson .....	800 00	500 00	.....	9,181 84	185 50	250 00	1,888 99	300 00	12,100 83
Kings .....	30,000 00	65,051 62	3,805 00	192,019 24	4,100 56	4,200 00	.....	15,008 87	305,179 79
Lewis .....	226 00	533 00	16 25	4,025 26	227 15	361 87	1,774 58	66 77	7,222 90
Livingston .....	1,000 00	1,080 00	.....	9,869 82	82 30	100 00	.....	2,474 92	14,547 04
Madison .....	940 00	1,498 00	.....	8,903 00	499 00	203 00	1,784 00	.....	12,780 00
Monroe .....	1,400 00	1,800 00	.....	14,053 24	.....	950 00	.....	468 00	18,671 24
Montgomery .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York .....	49,166 67	129,125 70	.....	456,836 58	1,804 20	48,207 24	34,218 17	.....	718,970 53
Niagara .....	500 00	500 00	.....	8,819 31	208 22	894 84	2,686 64	948 87	12,904 29
Oneida .....	1,900 00	1,416 87	.....	12,575 14	304 74	875 00	1,906 86	6,071 71	24,809 18
Ontario .....	1,900 00	9,140 00	.....	11,567 00	418 10	815 00	2,895 57	1,948 95	19,360 43
Orleans .....	214 00	666 00	.....	7,519 67	67 50	180 00	45 61	2,160 00	10,416 23
Putnam .....	945 11	600 00	.....	10,491 98	124 50	144 00	7,878 21	1,674 80	20,991 04
Saratoga .....	.....	.....	.....	4,453 11	27 72	200 00	.....	112 00	5,770 27





(C.)

*Expenses of administering Temporary Relief.*

COUNTIES.	Paid to overseers of the poor for their services.	Paid to justices of the peace for their services.	Paid for relieving indigent persons temporarily, not including last two items.	Whole amount ex- pended for tem- porary relief
Albany .....				
Allegany .....	\$448 76	\$47 53	\$2,846 52	\$4,342 81
Broome .....	728 09		11,542 04	12,270 13
Cattaraugus .....	496 20		5,749 81	6,245 01
Cayuga .....	1,641 66		17,775 16	19,416 82
Chautauqua .....	1,555 30	171 72	15,810 10	17,537 12
Chemung .....				
Chenango .....	563 96		2,343 81	2,907 77
Clinton .....			20,422 88	20,422 88
Columbia .....				
Cortland .....	160 00	10 10	2,125 20	2,295 30
Delaware .....	467 97		6,402 35	6,870 32
Dutchess .....			1,205 27	1,205 27
Erie .....	2,850 00		80,329 22	83,179 22
Essex .....	253 28		2,493 43	2,746 71
Franklin .....	624 00		4,938 82	5,562 82
Fulton .....			4,970 68	4,970 68
Genesee .....	211 50		2,611 55	2,823 05
Greene .....	223 50		1,480 10	1,703 60
Hamilton .....	51 00	12 00	55 00	118 00
Herkimer* .....				
Jefferson .....	2,874 52		22,992 75	25,867 27
Kings .....			25,771 43	25,771 43
Lewis .....	223 50		2,913 44	3,136 94
Livingston .....	450 00		2,972 39	3,422 39
Madison .....				
Monroe .....	4,794 67		72,248 49	77,043 16
Montgomery* .....				
New York .....	26,849 77		67,201 27	94,051 04
Niagara .....	1,930 50		15,245 10	17,175 60
Oneida .....	2,991 92		26,114 08	29,106 00
Onondaga .....			55,402 54	55,402 54
Ontario .....	979 01	37 12	5,250 45	6,266 58
Orange .....			2,124 56	2,124 56
Orleans .....	332 25	10 25	2,134 08	2,476 58
Oswego .....			13,894 07	13,894 07
Otsego .....	253 75		2,372 72	2,626 47
Putnam* .....				
Queens .....	1,858 00	10 00	5,084 25	6,942 25
Rensselaer* .....				
Richmond .....			7,115 22	7,115 22
Rockland .....	400 00		4,302 81	4,702 81
St. Lawrence .....	1,571 40	1,065 06	27,283 42	29,919 88
Saratoga .....				
Schenectady .....			2,521 22	2,521 22
Schoharie .....	50 00	10 00		60 00
Schuyler .....	489 50	264 70	7,249 25	7,993 45
Seneca .....	580 54		2,773 41	3,354 39
Steuben .....	1,060 48	38 45	2,474 29	3,573 22
Suffolk .....	1,105 55	73 48	21,680 69	22,864 72
Sullivan .....			4,257 25	4,257 25
Tioga .....	500 10	2 50	6,567 20	7,069 80
Tompkins .....	987 18		5,461 79	6,448 97
Ulster .....	1,595 44	13 00	5,451 72	7,060 16
Warren .....	303 50	730 75	2,067 49	3,101 74
Washington .....				
Wayne .....	1,683 75		12,372 84	14,056 59
Westchester .....		45 50	1,398 16	1,443 66
Wyoming .....	169 50		2,510 41	2,680 91
Yates* .....				
Total .....	\$74,850 00	\$2,562 25	\$724,112 20	\$801,524 45

\* No poor report.

## (D.)

*Value of Poor-house Establishments, Labor of Paupers and expenses of supporting each person.*

COUNTIES.	Acres of land attached to poor-house.	First cost of poor-house establishments.	Estimated value of poor-house establishments.	Value of labor of paupers.	Amount saved by their labor.	Sum expended above of each person.	Weekly expense of each person.
Albany.....	115	.....	\$375,000 00	\$1,000 00	\$1,000 00	\$13 98	\$0 36
Allegany.....	180	\$4,000 00	18,607 00	300 00	300 00	58 00	1 03
Broome.....	130	17,000 00	30,000 00	1,000 00	400 00	78 70	1 43
Cattaraugus.....	200	5,943 18	32,000 00	450 00	275 00	65 00	1 23
Cayuga.....	95	20,000 00	25,000 00	500 00	500 00	94 90	1 63
Chautauque.....	304	75,000 00	96,000 00	2,500 00	2,500 00	37 36	73
Chemung.....	175	.....	.....	.....	.....	79 98	1 53
Chenango.....	184	14,400 00	21,000 00	500 00	500 00	80 91	1 17
Columbia.....	80	.....	5,000 00	461 95	461 95	55 51	1 07
Delaware.....	218	.....	40,000 00	.....	.....	85 28	1 64
Franklin.....	118	5,000 00	7,000 00	400 00	400 00	50 00	97
Hamilton.....	200	10,000 00	15,000 00	.....	.....	73 90	1 40
Livingston.....	100	25,000 00	40,000 00	.....	.....	118 32	2 27
Montgomery.....	154	150,000 00	174,640 00	1,725 00	4,558 20	60 68	1 84
Orleans.....	87½	1,500 00	6,500 00	300 00	300 00	45 75	86
Rensselaer.....	163	1,509 75	42,973 00	.....	.....	55 18	1 06
Saratoga.....	100	12,000 00	15,000 00	.....	.....	84 50	1 68
Schenectady.....	220	7,986 34	12,000 00	.....	550 00	47 84	92
Seneca.....	183	11,900 00	15,000 00	500 00	500 00	49 56	95
Warren.....	.....	.....	.....	.....	.....	180 00	2 50
Washington.....	180	23,000 00	25,000 00	850 00	850 00	60 88	1 17
Wayne.....	70	900,000 00	1,300,000 00	1,000 00	1,000 00	126 47	2 43
Westchester.....	69	1,400 00	2,300 00	300 00	300 00	84 50	1 61
Livingston.....	118	7,165 00	44,873 00	1,000 00	1,000 00	71 00	1 38
Madison.....	159	5,140 00	15,004 00	.....	.....	63 58	1 33
Monroe.....	95	22,000 00	98,500 00	500 00	1,000 00	70 66	1 35
Montgomery.....	.....	.....	.....	.....	.....	.....	.....
New York.....	130	27,910 18	42,000 00	600 00	600 00	79 61	1 53
Albany.....	190	50,000 00	90,000 00	1,600 00	2,000 00	.....	1 09
Albany.....	35	15,960 00	22,965 00	.....	.....	59 80	1 15
Albany.....	312	10,990 00	21,300 00	650 00	650 00	93 40	1 79
Albany.....	293	15,000 00	65,000 00	2,100 00	4,000 00	108 94	2 09
Albany.....	131	5,863 00	15,000 00	168 00	168 00	65 35	1 25
Albany.....	60	8,000 00	25,000 00	.....	.....	65 47	1 25
Albany.....	130	10,000 00	18,000 00	.....	.....	.....	1 46
Albany.....	.....	.....	.....	.....	.....	23 59	65
Albany.....	131	7,000 00	31,000 00	.....	.....	.....	.....
Albany.....	48	10,000 00	15,000 00	.....	.....	80 78	1 56
Albany.....	115	18,331 15	15,000 00	.....	1,000 00	101 70	1 96
Albany.....	70	20,000 00	75,000 00	.....	.....	187 34	2 64
Albany.....	113	7,000 00	10,000 00	600 00	400 00	47 33	91
Albany.....	126	13,000 00	18,000 00	400 00	.....	55 03	1 06
Albany.....	335	68,000 00	75,000 00	.....	.....	84 75	1 63
Albany.....	200	5,000 00	15,000 00	.....	.....	.....	1 39
Albany.....	170	63,000 00	80,000 00	555 00	555 00	67 79	1 31
Albany.....	100	7,000 00	12,000 00	600 00	600 00	58 83	1 13
Albany.....	60	1,785 00	2,800 00	435 00	625 00	47 58	92
Albany.....	100	5,000 00	15,000 00	500 00	600 00	89 45	1 70
Albany.....	163	5,000 00	20,000 00	800 00	800 00	37 95	73
Albany.....	180	4,000 00	6,000 00	200 00	300 00	22 85	44
Albany.....	178	10,000 00	20,000 00	900 00	200 00	72 80	1 40
Albany.....	195	7,000 00	10,000 00	.....	.....	74 36	1 43
Albany.....	155	20,550 00	65,000 00	1,450 00	1,450 00	72 30	1 39
Albany.....	263	21,000 00	24,500 00	350 00	350 00	58 75	1 12
Albany.....	.....	.....	.....	.....	.....	74 88	1 44
Total.....	7,526½	\$1,172,233 48	\$2,143,751 00	\$26,554 95	\$22,708 15	\$2,632 34	\$71 59

\* No report.

† No specification.

(C.)

*Expenses of administering Temporary Relief.*

COUNTIES.	Paid to overseers of the poor for their services.	Paid to justices of the peace for their services.	Paid for relieving indigent persons temporarily, not including last two items.	Whole amount ex- pended for tem- porary relief.
Albany .....	.....	.....	.....	.....
Allegany .....	\$448 76	\$47 53	\$3,846 32	\$4,342 61
Broome .....	728 09	.....	11,542 04	12,270 13
Cattaraugus .....	496 20	.....	5,749 81	6,245 01
Cayuga .....	1,641 66	.....	17,775 16	19,416 82
Chautauqua .....	1,555 80	171 72	15,810 13	17,537 65
Chemung .....	.....	.....	.....	.....
Chenango .....	563 96	.....	2,343 81	2,907 77
Clinton .....	.....	.....	20,432 88	20,432 88
Columbia .....	.....	.....	.....	.....
Cortland .....	160 00	10 10	2,125 99	2,295 09
Delaware .....	467 97	.....	6,402 25	6,870 22
Dutchess .....	.....	.....	1,205 27	1,205 27
Erie .....	2,850 00	.....	80,339 32	83,189 32
Essex .....	253 28	.....	2,493 43	2,746 71
Franklin .....	694 00	.....	4,936 82	5,630 82
Fulton .....	.....	.....	4,970 68	4,970 68
Genesee .....	211 50	.....	2,611 55	2,823 05
Greene .....	223 50	.....	1,480 10	1,703 60
Hamilton .....	51 00	12 00	55 00	118 00
Herkimer * .....	.....	.....	.....	.....
Jefferson .....	2,874 52	.....	23,993 75	26,868 27
Kings .....	.....	.....	25,771 43	25,771 43
Lewis .....	223 50	.....	2,913 44	3,136 94
Livingston .....	450 00	.....	2,973 39	3,423 39
Madison .....	.....	.....	.....	.....
Monroe .....	4,794 67	.....	72,248 49	77,043 16
Montgomery * .....	.....	.....	.....	.....
New York .....	26,849 77	.....	67,201 27	94,051 04
Niagara .....	1,930 50	.....	15,245 10	17,175 60
Onondaga .....	2,991 92	.....	25,114 08	28,106 00
Ontario .....	.....	.....	55,402 54	55,402 54
Orange .....	979 01	37 12	5,250 45	6,266 58
Orleans .....	.....	.....	2,124 56	2,124 56
Oswego .....	332 25	10 25	2,134 08	2,476 58
Otsego .....	.....	.....	12,894 07	12,894 07
Putnam * .....	253 75	.....	2,372 72	2,626 47
Queens .....	1,858 00	10 00	5,084 25	6,952 25
Rensselaer * .....	.....	.....	.....	.....
Richmond .....	.....	.....	7,115 22	7,115 22
Rockland .....	400 00	.....	4,302 81	4,702 81
St. Lawrence .....	1,571 40	1,065 06	27,383 42	29,919 88
Saratoga .....	.....	.....	.....	.....
Schenectady .....	.....	.....	2,521 22	2,521 22
Schoharie .....	50 00	10 00	.....	60 00
Schuyler .....	439 50	264 70	7,249 25	7,953 45
Seneca .....	580 54	.....	3,773 41	4,353 95
Stenben .....	1,060 48	38 45	2,474 29	3,573 22
Suffolk .....	1,105 55	73 48	21,080 69	22,264 72
Sullivan .....	.....	.....	4,257 25	4,257 25
Tioga .....	500 10	2 50	6,567 90	7,069 50
Tompkins .....	987 18	.....	5,461 79	6,448 97
Ulster .....	1,595 44	13 00	5,451 72	7,060 16
Warren .....	393 50	730 75	2,067 49	3,181 74
Washington .....	.....	.....	.....	.....
Wayne .....	1,683 75	.....	12,372 84	14,056 59
Westchester .....	.....	45 59	1,398 16	1,443 75
Wyoming .....	169 50	.....	2,510 41	2,680 91
Yates * .....	.....	.....	.....	.....
Total .....	\$74,850 00	\$2,562 25	\$724,112 20	\$797,524 45

\* No poor report.

(D.)

Value of Poor-house Establishments, Labor of Paupers and expenses of supporting each person.

COUNTIES.	Acres of land attached to poor-house.	First cost of poor-house establishments.	Estimated value of poor-house establishments.	Value of labor of paupers.	Amount saved by their labor.	Sum exp'd above earnings of paupers for support of each person.	Weekly expense of each person.
Albany.....	115	.....	\$275,000 00	\$1,000 00	\$1,000 00	\$18 98	\$0 28
Allegany.....	180	\$4,000 00	16,607 00	800 00	800 00	58 00	1 02
Broome.....	180	17,000 00	30,000 00	1,000 00	400 00	76 70	1 48
Cattaraugus.....	200	5,948 16	32,000 00	450 00	275 00	65 00	1 25
Chayuga.....	96	20,000 00	25,000 00	500 00	500 00	94 90	1 82
Chautauqua.....	806	75,000 00	95,000 00	2,500 00	2,500 00	37 26	1 72
Chemung.....	175	.....	.....	.....	.....	79 88	1 58
Chenango.....	184	14,400 00	21,000 00	500 00	500 00	60 91	1 17
Columbia.....	80	.....	5,000 00	461 95	461 95	55 51	1 07
Portland.....	218	.....	40,000 00	.....	.....	85 28	1 64
Delaware.....	118	5,000 00	7,000 00	400 00	400 00	50 00	97
Dutchess.....	200	10,000 00	15,000 00	.....	.....	72 80	1 40
Essex.....	100	25,000 00	40,000 00	.....	.....	118 22	2 27
Franklin.....	154	150,000 00	174,640 00	1,725 00	4,558 20	69 68	1 34
Hamilton.....	87½	1,500 00	6,500 00	300 00	300 00	45 76	88
Montgomery.....	162	1,609 75	43,972 00	.....	.....	55 18	1 06
New York.....	100	12,000 00	15,000 00	.....	.....	84 50	1 63
Orleans.....	220	7,988 24	19,000 00	560 00	560 00	47 84	92
Seneca.....	188	11,900 00	15,000 00	500 00	500 00	49 56	95
Ulster.....	.....	.....	.....	.....	.....	130 00	2 50
Warren.....	180	23,000 00	25,000 00	850 00	850 00	60 88	1 17
Washington.....	70	909,000 00	1,200,000 00	1,000 00	1,000 00	126 47	2 43
Westchester.....	69	1,400 00	2,200 00	200 00	200 00	84 50	1 63
Livingston.....	118	7,165 00	44,878 00	1,000 00	1,000 00	71 00	1 36
Madison.....	159	5,140 00	16,004 00	.....	.....	63 52	1 23
Monroe.....	95	32,000 00	98,500 00	500 00	1,000 00	70 66	1 35
Montgomery.....	.....	.....	.....	.....	.....	.....	.....
New York.....	.....	.....	.....	.....	.....	.....	.....
Niagara.....	120	27,910 18	43,000 00	600 00	600 00	79 61	1 53
Oneida.....	190	50,000 00	90,000 00	1,500 00	3,000 00	53 40	1 02
Rensselaer.....	85	15,960 00	93,955 00	.....	.....	59 80	1 15
Saratoga.....	212	10,990 00	21,200 00	650 00	650 00	93 40	1 79
Schoharie.....	263	15,000 00	65,000 00	2,100 00	4,000 00	108 94	2 09
Schoharie.....	121	5,663 00	15,000 00	168 00	168 00	65 25	1 25
Schoharie.....	60	8,000 00	35,000 00	.....	.....	65 47	1 25
Schoharie.....	180	10,000 00	18,000 00	.....	.....	75 92	1 46
Schoharie.....	.....	.....	.....	.....	.....	.....	.....
Schoharie.....	.....	.....	.....	.....	.....	83 59	65
Schoharie.....	.....	.....	.....	.....	.....	.....	.....
Schoharie.....	121	7,000 00	21,000 00	.....	.....	.....	.....
Schoharie.....	48	10,000 00	15,000 00	.....	.....	80 78	1 56
Schoharie.....	115	16,331 15	15,000 00	.....	1,000 00	101 70	1 96
Schoharie.....	70	20,000 00	75,000 00	.....	.....	137 24	2 64
Schoharie.....	112	7,000 00	10,000 00	600 00	400 00	47 82	91
Schoharie.....	.....	.....	.....	.....	.....	55 08	1 06
Schoharie.....	126	12,000 00	18,000 00	400 00	400 00	84 76	1 63
Schoharie.....	335	68,000 00	75,000 00	.....	.....	67 08	1 29
Schoharie.....	200	5,000 00	15,000 00	.....	.....	67 79	1 31
Schoharie.....	170	63,000 00	80,000 00	555 00	555 00	58 83	1 12
Schoharie.....	100	7,000 00	12,000 00	600 00	600 00	47 58	92
Schoharie.....	60	1,785 00	9,800 00	425 00	625 00	88 45	1 70
Schoharie.....	100	5,000 00	15,000 00	500 00	500 00	87 96	73
Schoharie.....	168	5,000 00	20,000 00	800 00	.....	32 85	64
Schoharie.....	180	4,000 00	6,000 00	200 00	200 00	72 80	1 40
Schoharie.....	178	10,000 00	20,000 00	900 00	900 00	74 86	1 43
Schoharie.....	195	7,000 00	10,000 00	.....	.....	72 30	1 39
Schoharie.....	165	20,550 00	65,000 00	1,450 00	1,450 00	58 76	1 12
Schoharie.....	268	21,000 00	24,500 00	850 00	850 00	74 86	1 44
Schoharie.....	.....	.....	.....	.....	.....	.....	.....
Total.....	7,526½	\$1,172,233 48	\$3,148,751 00	\$26,554 95	\$32,708 15	\$3,652 84	\$71 50

\* No report.

† No specification.

(E.)

## Description of persons relieved and supported, and changes during the year.

OF PERSONS IN OVER DEC. 1ST.		OF THE PRECEDING TOTAL THERE WERE					OF THE PERSONS RELIEVED AND SUP- PORTED DURING THE YEAR, THERE WERE				
		Foreigners.	Both in the U. States.	Lunatics.	Idiots.	Blind.	Mutes.	Foreigners.	Both in the U. States.		
Males.	Females.										
146	290	180	100	56	6	3	4	1,008	728	3	8
81	161	14	49	10	5	2	1	79	109	4	4
61	118	45	68	22	14	2	1	694	909	3	3
38	73	18	54	27	8	1	2	140	210	3	3
36	77	45	53	27	8	2	2	1,228	538	1	1
106	178	61	97	68	13	2	3	1,191	1,526	4	4
26	47	8	39	8	7	2	1	41	87	1	1
40	86	13	78	21	4	4	1	268	319	1	1
39	64	45	31	13	10	4	1	918	507	1	1
98	184	80	54	10	10	4	1	591	500	1	1
27	60	10	50	13	18	3	1	86	206	1	1
16	44	14	20	6	13	2	1	111	316	1	1
66	106	50	56	13	13	2	1	231	161	3	3
287	568	320	273	147	8	2	1	787	635	1	1
43	91	31	70	11	4	1	1	37	263	1	1
21	58	27	26	9	6	2	1	41	60	1	1
24	54	26	26	3	3	2	1	39	43	1	1
20	55	33	53	21	9	2	1	734	266	1	1
84	126	20	108	13	9	2	2	561	604	1	1
8	13	3	9	1	2	1	1	3	16	1	1
109	195	60	126	76	10	3	1	1,645	306	3	3
1,092	2,235	1,209	948	627	81	15	4	2,032	11,085	10	10
28	59	10	43	21	2	1	2	19	108	21	15
70	119	49	70	22	10	5	1	147	139	10	6
76	115	63	68	20	10	1	1	844	910	14	6
103	176	116	66	16	3	5	1	2,170	1,180	9	18
3,024	5,548	3,438	2,210	1,227	161	100	1	80,000	18,174	167	304
954	1,654	1,065	170	17	9	7	1	2,714	1,608	17	161
134	231	207	140	140	18	44	1	9,479	9,479	94	44
74	173	141	51	47	14	2	1	1,479	1,479	147	2
51	103	103	103	103	103	103	103	103	103	103	103

Minors  
of persons  
of persons  
of persons

Ulster	136	8	19	2	128	.....	33	3	10	3	1	235	.....	19	21	5	1				
Oswego	169	1	7	16	80	.....	38	1	8	.....	.....	511	.....	17	14	23	1				
Otsego	91	2	14	2	64	.....	39	.....	14	.....	1	85	.....	50	13	1	.....				
Putnam	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71	.....	18	17	.....	.....				
Queens	1,089	4	5	.....	819	.....	108	1	.....	.....	.....	2,019	.....	23	.....	3	.....				
Rensselaer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....				
Richmond	121	3	11	8	119	.....	55	.....	.....	.....	1	.....	.....	.....	.....	.....	.....				
Rockland	260	4	6	.....	205	.....	30	1	.....	.....	1	800	.....	8	.....	1	.....				
Saratoga	181	2	29	10	70	.....	53	3	.....	.....	.....	116	.....	40	20	4	.....				
Schenectady	778	.....	15	.....	763	.....	33	4	.....	.....	.....	751	.....	23	.....	5	.....				
Schoharie	194	3	11	2	23	.....	28	1	.....	.....	.....	12	.....	8	6	1	.....				
Schuyler	.....	.....	3	.....	2	.....	24	1	.....	.....	.....	36	.....	1	1	1	.....				
Seneca	193	1	5	1	114	.....	22	3	.....	.....	.....	410	.....	12	7	13	.....				
St. Lawrence	146	13	19	24	163	.....	65	3	.....	.....	.....	1,828	.....	8	18	27	8				
Stenben	111	.....	12	13	84	.....	34	2	.....	.....	.....	611	.....	19	19	3	1				
Suffolk	189	8	24	12	85	.....	35	3	.....	.....	.....	457	.....	24	6	7	1				
Sullivan	45	1	12	.....	38	.....	37	3	.....	.....	.....	134	.....	30	1	1	.....				
Tioga	128	2	6	.....	108	.....	21	.....	.....	.....	.....	361	.....	14	5	10	.....				
Tompkins	111	.....	8	.....	73	.....	15	2	.....	.....	.....	430	.....	2	2	4	.....				
Ulster	299	6	13	14	219	.....	48	4	.....	.....	.....	1,296	.....	19	13	3	.....				
Warren	83	1	7	.....	8	.....	24	3	.....	.....	.....	176	.....	9	7	3	.....				
Washington	186	6	17	4	187	.....	45	5	.....	.....	.....	108	.....	39	15	5	.....				
Wayne	403	.....	8	.....	382	.....	28	1	.....	.....	.....	788	.....	45	25	8	.....				
Westchester	1,659	8	43	5	1,233	.....	133	4	.....	.....	.....	1,120	.....	15	3	4	.....				
Wyoming	30	.....	4	.....	19	.....	26	3	.....	.....	.....	57	.....	15	10	3	.....				
Yates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....				
Total	48,469	975	1,540	377	39,322	457	6,798	7,512	14,310	7,785	6,525	3,395	511	289	48	85,596	46,087	5,583	766	679	100

\* No report.

† No specification.

(F.)

*Number of Children in the Poor-houses, under sixteen years of age, and the number instructed during the year.*

COUNTIES.	Females under 16, Dec. 1, 1872.	Males under 16, Dec. 1, 1872.	Total of both sexes.	Number instructed during the year.	Time of instruction.	Remarks.
Albany ..	18	20	38	...	...	
Allegany ..	8	4	7	8	5	
Broome ..	...	...	...	...	...	Sent to Susquehanna Valley Home
Cattaraugus ..	1	8	4	8	7	
Cayuga ..	1	1	2	...	...	Sent to orphan asylum.
Chautauqua ..	2	5	7	17	6	
Chemung ..	1	2	3	...	...	Sent to orphan asylum.
Chenango ..	4	5	9	...	...	
Clinton ..	1	8	4	4	3	
Columbia ..	2	8	5	...	...	Sent to orphan asylum.
Cortland ..	...	2	2	18	12	
Delaware ..	...	...	...	...	...	
Dutchess ..	2	5	7	...	...	Sent away for instruction.
Erie ..	80	21	51	51	12	
Essex ..	11	6	17	26	6½	
Franklin ..	8	...	8	2	8	
Fulton ..	2	8	10	4	8	
Genesee ..	4	3	7	...	...	
Greene ..	12	16	28	20	5	
Hamilton ..	...	...	...	...	...	
Herkimer *	...	...	...	...	...	
Jefferson ..	10	8	18	...	...	
Kings ..	219	114	333	...	11	
Lewis ..	2	8	5	5	5	
Livingston ..	7	10	17	25	10	
Madison ..	1	3	4	...	...	
Monroe ..	8	7	10	...	...	
Montgomery *	...	...	...	...	...	
New York ..	323	714	1,037	858	11	
Niagara ..	12	21	33	25	11	
Onesida ..	11	4	15	...	...	
Onondaga ..	10	12	22	...	...	Sent to orphan asylum.
Ontario ..	9	11	20	21	11	
Orange ..	4	15	19	30	12	
Orleans ..	4	11	15	20	7½	
Oswego ..	...	...	...	...	...	Sent to Oswego Orphan Asylum.
Otsego ..	7	5	12	23	5	
Putnam ..	...	...	...	...	...	
Queens ..	6	9	15	...	...	
Rensselaer *	...	...	...	...	...	
Richmond ..	15	20	35	30	11	
Rockland ..	8	4	7	12	12	
Saratoga ..	2	8	5	8	4	
Schenectady ..	...	2	2	2	11	
Schoharie ..	4	4	8	...	...	
Schuyler ..	7	8	10	...	...	
Seneca ..	5	12	17	15	12	
St. Lawrence ..	23	6	29	30	6	
Stauben ..	8	2	5	...	...	
Suffolk ..	5	8	13	15	4	
Sullivan ..	2	5	7	...	...	
Tioga ..	2	2	4	8	8	
Tompkins ..	2	6	8	...	...	Sent to Susquehanna Valley Home
Ulster ..	7	8	15	9	4	
Warren ..	6	2	8	2	7	
Washington ..	39	24	63	19	12	
Wayne ..	8	8	6	...	...	
Westchester ..	23	30	53	50	11	
Wyoming ..	1	1	2	...	...	
Yates *	...	...	...	...	...	
	877	1,199	2,076	1,845	253	

\* No report.

(G.)

[ Native country of the persons relieved or supported during the year 1872, as far as could be ascertained from the reports of the Superintendents of the Poor.

COUNTIES.	TOTAL.		UNITED STATES.		IRELAND.		ENGLAND.		SCOTLAND.		GERMANY.		FRANCE.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Albany .....	881	918	249	176	400	546	40	60	24	15	100	40	40	55
Allegany .....	115	133	81	88	19	29	6	5	.....	.....	9	11	.....	.....
Broome .....	897	756	514	455	261	224	26	8	11	14	53	41	18	6
Cattaraugus .....	193	157	107	103	50	38	11	5	5	.....	14	9	5	2
Cayuga .....	786	995	217	341	426	513	24	31	22	11	74	88	12	5
Chautauqua .....	2, 398	749	1, 214	312	626	185	197	13	69	6	553	173	30	4
Chemung .....	88	40	53	34	17	5	10	.....	2	.....	5	1	.....	.....
Chenango .....	330	205	159	160	180	20	6	4	.....	.....	12	8	3	2
Clinton .....	694	818	297	300	145	162	21	32	19	22	47	37	55	95
Columbia .....	681	100	150	50	476	49	2	.....	.....	.....	3	1	.....	.....
Cortland .....	153	162	115	120	20	20	11	9	2	3	5	7	2	1
Delaware .....	270	157	175	141	50	10	1	.....	6	4	30	2	5	.....
Dutchess .....	286	106	112	49	119	36	9	1	3	.....	15	.....	6	.....
Erie .....	744	563	281	244	225	162	74	51	7	8	112	74	10	2
Essex .....	163	227	150	213	6	9	2	.....	1	.....	.....	1	1	.....
Franklin .....	43	58	22	38	9	8	1	.....	1	.....	.....	.....	.....	.....
Fulton .....	43	28	29	19	2	.....	1	.....	.....	.....	1	.....	.....	.....
Genesee .....	727	402	290	105	230	142	62	45	.....	.....	108	88	26	15
Greene .....	619	556	419	396	40	21	1	.....	2	.....	11	4	1	.....
Hamilton .....	15	4	12	1	1	.....	1	.....	.....	.....	1	.....	.....	.....
Herkimer* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson .....	753	1, 092	95	110	.....	28	2	1	.....	1	.....	1	3	.....
Kings .....	15, 922	15, 130	5, 012	6, 014	5, 421	4, 311	937	608	71	32	4, 213	4, 019	51	16
Lewis .....	82	105	71	97	4	3	1	.....	.....	.....	3	4	3	1
Livingston .....	246	82	122	60	67	17	34	3	6	.....	15	8	1	.....
Madison .....	437	106	146	73	259	25	8	.....	1	.....	21	4	1	1
Monroe .....	1, 475	2, 875	390	790	675	1, 305	56	119	15	35	278	514	24	39
Montgomery* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York .....	21, 322	18, 912	6, 869	5, 305	9, 097	10, 174	938	608	278	214	3, 013	2, 188	201	59
Niagara .....	2, 523	2, 844	912	630	941	1, 155	230	444	45	58	235	375	14	16
Oneida .....	2, 832	1, 841	1, 456	846	615	463	179	77	38	15	451	249	30	19
Onondaga .....	2, 011	2, 511	1, 429	614	947	1, 181	40	46	25	33	325	365	35	38
Ontario .....	563	588	330	350	160	190	40	80	16	8	10	6	5	4
Orange .....	376	214	165	130	151	34	.....	.....	1	1	85	25	.....	.....
Orleans .....	482	294	153	113	172	87	56	36	14	7	29	12	24	7

\* No report.



G—(Continued).

COUNTIES.	TOTAL.		UNITED STATES.		IRELAND.		ENGLAND.		SCOTLAND.		GERMANY.		FRANCE.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Oswego .....	89	80	47	37	16	23	10	2	2	3	1	.....	1	.....
Otsego .....	239	141	181	128	47	13	4	.....	1	.....	5	.....	1	.....
Putnam* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queens .....	1,712	849	933	249	922	112	49	7	2	.....	415	25	5	1
Rensselaer* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond† .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland .....	799	51	35	15	675	25	4	.....	3	.....	75	10	1	1
Saratoga .....	137	119	80	60	44	51	4	.....	2	.....	5	7	.....	.....
Schenectady .....	761	87	80	17	301	61	47	2	3	.....	290	7	21	.....
Schuyler .....	66	128	54	104	11	23	1	2	.....	.....	.....	.....	.....	.....
Schoharie .....	73	51	66	46	2	2	.....	.....	.....	.....	.....	.....	.....	.....
Seneca .....	631	217	322	116	205	51	29	14	5	.....	1	.....	1	.....
St. Lawrence .....	1,126	1,367	820	945	239	273	34	36	34	41	60	31	10	2
Stenben .....	739	1,497	361	254	240	157	59	85	1	.....	8	6	17	33
Suffolk .....	329	255	89	68	13	9	6	2	2	.....	74	41	.....	.....
Sullivan .....	186	203	101	154	47	20	7	3	3	.....	5	4	.....	.....
Tioga .....	436	385	213	242	128	109	23	13	5	.....	26	25	2	1
Tompkins .....	426	187	107	76	150	40	50	18	10	.....	59	14	7	1
Ulster .....	1,253	837	596	373	543	347	17	14	12	9	187	91	3	2
Warren .....	122	117	85	23	8	2	2	.....	1	.....	1	.....	.....	.....
Washington .....	147	109	83	65	41	31	2	.....	4	.....	4	3	7	9
Wayne .....	713	467	286	156	165	190	135	115	12	8	65	20	15	9
Westchester .....	971	706	361	196	400	352	83	70	40	35	65	35	9	11
Wyoming .....	107	88	73	65	15	12	3	2	1	1	15	8	.....	.....
Yates* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	70,875	60,680	34,533	31,434	25,051	22,984	3,601	2,574	898	596	11,184	8,696	723	465

\* No report.

† No special poor report



G—(Continued).

COUNTIES.	CANADA.		ITALY.		SWEDEN.		SPAIN.		PRUSSIA.		DENMARK.		HOLLAND.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Rockland .....	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Saratoga .....	2	1	...	...	...	...	...	...	...	...	...	...	...	...
Schenectady .....	19	...	...	...	...	...	...	...	...	...	...	...	...	...
Schuyler .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Schoharie .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Seneca .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Lawrence .....	364	484	...	...	...	...	...	...	...	...	...	...	...	...
Steuben .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffolk .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sullivan .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tioga .....	8	5	3	1	...	...	...	...	...	...	...	...	...	...
Tompkins .....	28	19	...	...	...	...	...	...	...	...	...	...	...	...
Ulster .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Warren .....	4	2	...	...	...	...	...	...	...	...	...	...	...	...
Washington .....	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Wayne .....	40	15	15	10	...	...	...	...	...	...	...	...	80	14
Westchester .....	10	5	...	...	...	...	...	...	...	...	...	...	...	...
Wyoming .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yates .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1,474	1,386	28	18	101	41	3	3	48	26	3	3	50	26



G — (Continued).

COUNTIES.	CANADA.		ITALY.		SWEDEN.		SPAIN.		PRUSSIA.		DENMARK.		HOLLAND.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Rockland .....	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Saratoga .....	2	1	...	...	...	...	...	...	...	...	...	...	...	...
Schenectady .....	19	...	...	...	...	...	...	...	...	...	...	...	...	...
Schuyler .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Schoharie .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Seneca .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Lawrence .....	364	484	...	...	...	...	...	...	...	...	...	...	...	...
Steuben .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffolk .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sullivan .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tioga .....	8	5	3	1	...	...	...	...	...	...	...	...	...	...
Tompkins .....	28	19	...	...	...	...	...	...	...	...	...	...	...	...
Ulster .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Warren .....	4	2	...	...	...	...	...	...	...	...	...	...	...	...
Washington .....	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Wayne .....	40	15	15	10	...	...	...	...	...	...	...	...	30	14
Westchester .....	10	5	...	...	...	...	...	...	...	...	...	...	...	...
Wyoming .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yates .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1,474	1,386	28	18	101	41	3	3	48	26	3	3	50	25



G—(Continued).

COUNTIES.	SWITZERLAND.		POLAND.		AUSTRIA.		INDIA.		BELGIUM.		WALES.		GREENLAND.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Richmond .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saratoga .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schenectady .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schuyler .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schoharie .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seneca .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Lawrence .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Steuben .....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Suffolk .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sullivan .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tioga .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....
Tompkins .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ulster .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Westchester .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yates .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	33	11	13	3	5	.....	1	1	5	3	75	53	.....	.....





G — (Continued).

COUNTIES.	RUSSIA.		NORWAY.		NOVA SCOTIA.		ASIA.		AFRICA.		WEST INDIES.		NOT REPORTED.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Rockland .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saratoga .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schenectady .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schoharie .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Schuyler .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seneca .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	149
St. Lawrence .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120	.....
Stenben .....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	212	172
Suffolk .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sullivan .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tioga .....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tompkins .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ulster .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71	85
Washington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Westchester .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yates .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	4	.....	1	1	1	1	1	.....	8	4	11	.....	2,035	2,355

• (H.)

*Causes of pauperism of the persons relieved or supported during the year 1872, as far as could be ascertained from the reports of the superintendents of the poor.*

COUNTIES.	TOTAL.		INTEMPERANCE DIRECT.		CHILDREN HAVING INTEMPERATE PARENTS.		FEMALES HAVING INTEMPERATE HUSBANDS.		DEBAUCHERY.		DEBAUCHERY OF PARENTS.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Albany .....	881	913	87	139	28	40	.....	60	40	60	56	84
Allegany .....	115	133	25	1	6	10	.....	18	2	4	2	2
Broome .....	807	756	83	8	36	46	.....	18	2	24	4	19
Cattaraugus .....	198	157	51	18	2	2	.....	2	1	5	1	1
Cayuga .....	786	936	201	49	96	103	.....	186	44	51	.....	.....
Chautauqua .....	2,808	749	558	100	85	60	.....	55	80	40	.....	.....
Chemung .....	88	40	5	1	1	2	.....	4	2	7	.....	.....
Chenango .....	380	205	145	5	6	2	.....	6	4	.....	3	2
Clinton .....	694	818	9	7	.....	.....	.....	.....	.....	.....	.....	.....
Columbia .....	631	100	494	68	.....	.....	.....	.....	.....	.....	.....	.....
Cortland .....	158	162	28	15	25	25	.....	10	3	2	8	12
Delaware .....	270	157	45	.....	.....	.....	.....	8	.....	.....	.....	.....
Dutchess .....	286	106	99	.....	.....	.....	.....	1	.....	.....	.....	.....
Erle .....	744	568	303	225	32	7	.....	23	20	14	19	3
Essex .....	163	227	18	2	12	14	.....	3	.....	12	8	12
Franklin .....	43	53	6	7	2	5	.....	4	.....	.....	.....	.....
Fulton .....	43	28	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Genesee .....	727	402	292	60	42	25	.....	74	38	30	12	13
Greene .....	619	566	17	2	12	1	.....	.....	.....	1	.....	.....
Hamilton .....	15	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Herkimer* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson .....	753	1,092	36	10	18	12	.....	5	7	13	7	8
Kings .....	15,922	15,130	7,782	5,827	3,216	2,021	.....	784	.....	.....	3	1
Lewis .....	82	105	7	12	3	1	.....	4	1	.....	6	5
Livingston .....	245	83	81	6	9	1	.....	3	.....	7	.....	.....
Madison .....	437	106	160	21	3	3	.....	3	12	5	5	3
Monroe .....	1,475	2,875	263	160	275	325	.....	560	.....	.....	.....	.....
Montgomery* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York .....	21,322	18,912	58	551	17	8	.....	.....	336	1,207	.....	.....
Niagara .....	2,522	2,844	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oneida .....	2,882	1,841	927	77	73	75	.....	116	7	25	335	69
Onondaga .....	2,011	2,511	130	141	300	323	.....	.....	15	20	.....	.....
Ontario .....	562	568	70	63	9	8	.....	12	.....	.....	.....	.....

\* No report.

# H—(Continued).

COUNTIES.	TOTAL.		INTEMPERANCE DIRECT.		CHILDREN HAVING INTEMPERATE PARENTS.		FEMALES HAVING INTEMPERATE HUSBANDS.		DEBAUCHERY.		DEBAUCHERY OF PARENTS.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Orange.....	376	214	40	54	10	5	.....	8	.....	1	2	10
Orleans.....	482	294	120	18	30	22	.....	21	.....	4	5	8
Oswego.....	89	80	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Otsego.....	289	141	56	30	5	3	.....	8	.....	.....	.....	.....
Putnam.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queens.....	1,712	849	70	13	12	8	.....	.....	.....	.....	.....	.....
Rensselaer.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland.....	799	51	400	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saratoga.....	187	119	71	32	3	3	.....	2	.....	.....	.....	.....
Schenectady.....	761	87	50	7	.....	.....	.....	.....	.....	.....	.....	.....
Schuyler.....	66	128	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schoharie.....	73	51	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seneca.....	681	217	82	41	30	12	.....	11	.....	.....	.....	.....
St. Lawrence.....	1,126	1,367	49	36	76	94	.....	47	.....	4	14	15
Steuben.....	1,739	497	180	58	22	23	.....	29	.....	17	5	5
Suffolk.....	399	255	19	1	.....	1	.....	1	.....	.....	.....	.....
Sullivan.....	186	203	52	21	.....	1	.....	14	.....	.....	.....	.....
Tioga.....	436	385	25	3	6	4	.....	5	.....	.....	.....	.....
Tompkins.....	426	187	302	108	60	40	.....	38	.....	.....	.....	.....
Ulster.....	1,358	887	712	127	143	104	.....	126	.....	.....	.....	69
Warren.....	1,122	117	10	1	.....	.....	.....	.....	.....	2	5	2
Washington.....	147	109	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne.....	713	467	294	76	70	35	.....	75	.....	80	10	12
Westchester.....	971	706	120	70	30	25	.....	30	.....	29	19	10
Wyoming.....	107	88	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yates.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	70,875	60,680	14,093	8,261	4,806	3,499	.....	2,869	777	1,891	529	360

\* No report.

† No special poor report.

COUNTIES.	IDLENESS.		VAGRANCY.		IDIOTCY.		LUNACY.		BLINDNESS.		LAMENESS.		SICKNESS.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Albany .....	80	69	70	46	12	10	120	83	12	9	40	46	110	96
Allegany .....	5	13	6	11	4	2	10	15	2	.....	8	11	23	19
Broome .....	.....	.....	397	236	7	11	14	20	9	2	29	14	83	46
Cattaraugus .....	3	.....	.....	.....	6	2	21	20	2	2	5	.....	80	28
Cayuga .....	86	18	168	817	4	6	87	45	4	7	27	10	20	51
Chautauqua .....	30	15	4	1	10	3	41	47	2	1	40	10	80	85
Chemung .....	3	.....	7	3	7	3	5	5	3	1	15	2	17	4
Chenango .....	58	23	1	.....	7	6	11	14	3	1	5	.....	59	49
Clinton .....	9	1	.....	.....	7	3	6	7	.....	1	.....	.....	.....	.....
Columbia .....	.....	.....	.....	.....	5	5	5	5	3	1	2	.....	90	10
Cortland .....	6	5	7	.....	5	5	5	5	2	1	3	4	8	4
Delaware .....	12	.....	6	6	9	8	7	6	1	1	30	4	69	50
Dutchess .....	2	.....	.....	.....	10	3	7	11	2	3	3	2	8	2
Erie .....	3	49	.....	14	1	1	12	57	2	3	9	16	65	49
Essex .....	3	8	4	12	4	23	8	3	1	.....	2	3	14	25
Franklin .....	1	2	2	4	13	3	7	4	.....	1	3	4	8	5
Fulton .....	.....	.....	.....	.....	2	3	1	2	.....	1	4	3	2	2
Genesee .....	72	40	108	80	19	11	19	11	2	1	30	.....	18	7
Greene .....	.....	.....	3	1	5	14	5	14	.....	.....	13	.....	7	9
Hamilton .....	.....	.....	.....	.....	8	8	.....	.....	.....	.....	1	.....	.....	1
Herkimer .....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson .....	3	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kings .....	201	167	10	.....	3	7	21	56	2	1	2	1	3	5
Lewis .....	.....	.....	.....	.....	13	8	411	640	6	9	463	318	409	602
Livingston .....	1	.....	2	1	5	5	13	17	.....	.....	4	1	1	1
Madison .....	39	.....	8	.....	6	8	21	18	2	3	17	.....	8	4
Monroe .....	60	25	74	5	.....	.....	12	18	.....	1	18	.....	25	15
Montgomery .....	.....	.....	45	14	5	4	20	15	10	8	85	20	124	275
New York .....	.....	.....	295	224	108	89	1,390	1,356	121	83	188	37	18,183	7,913
Niagara .....	.....	.....	7	6	2	1	12	5	78	63	37	28	275	350
Oneida .....	.....	.....	.....	.....	16	12	72	123	82	12	62	26	242	405
Onondaga .....	25	29	62	50	4	4	37	50	5	4	40	44	100	103
Ontario .....	3	8	15	18	6	8	3	2	3	2	3	1	80	73
Orange .....	7	5	100	31	20	1	8	11	5	.....	4	1	10	7
Orleans .....	39	14	53	30	9	5	10	7	13	10	31	6	70	41
Oswego .....	.....	.....	.....	.....	5	7	25	25	.....	1	6	1	6	1
Otsego .....	12	4	.....	2	10	7	7	11	.....	.....	9	.....	56	37
Putnam .....	.....	.....	.....	.....	.....	.....	16	.....	.....	.....	.....	.....	.....	.....
Queens .....	.....	.....	.....	.....	.....	.....	.....	6	.....	1	.....	6	407	84
Rensselaer .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

H—(Continued).

COUNTIES.	IDLENESS.		VAGRANCY.		IDIOTCY.		LUNACY.		BLINDNESS.		LAMENESS.		SICKNESS.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Rockland .....	.....	.....	.....	.....	.....	.....	5	3	1	.....	3	8	25	30
Saratoga .....	.....	.....	.....	.....	.....	.....	17	23	1	.....	.....	.....	17	14
Schenectady .....	.....	.....	600	43	.....	.....	6	16	5	.....	11	.....	21	10
Schuyler .....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2	.....	1	.....
Schoharie .....	2	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....
Seneca .....	.....	.....	.....	.....	.....	.....	10	7	7	.....	75	.....	.....	.....
St. Lawrence .....	29	27	.....	.....	.....	.....	4	2	17	.....	75	23	95	18
Steuben .....	23	13	27	26	7	6	9	4	2	10	.....	45	231	227
Suffolk .....	2	.....	46	28	10	9	9	10	2	1	35	13	127	89
Sullivan .....	24	.....	12	3	1	5	16	18	6	1	1	.....	19	25
Tioga .....	.....	.....	.....	.....	.....	.....	6	24	1	.....	9	.....	8	7
Tompkins .....	.....	.....	.....	.....	.....	.....	5	9	10	.....	19	.....	24	43
Ulster .....	85	20	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Warren .....	3	1	49	16	2	6	9	10	3	.....	45	29	79	35
Washington .....	3	.....	.....	.....	.....	.....	6	3	2	.....	4	1	.....	2
Wayne .....	30	5	3	8	7	8	15	24	3	.....	11	15	.....	14
Westchester .....	145	80	18	7	13	12	15	30	5	.....	40	28	25	20
Wyoming .....	1	1	238	.....	2	1	10	5	3	.....	30	12	120	70
Yates .....	.....	.....	.....	.....	6	4	5	10	2	.....	2	.....	2	2
Total .....	1,058	630	2,563	1,490	490	346	2,653	2,931	416	263	1,609	791	16,549	11,064

COUNTIES.	DECEASED.		OLD AGE.		DEAF AND DUMB, OR MUTES.		INDIGENT AND DESTITUTE.		CHILDREN HAVING DESTITUTE PARENTS.		CHILDREN HAVING SICK PARENTS.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Albany	40	19	60	40	6	3	60	70	19	14	20	19
Allegany	.....	.....	7	6	3	2	3	6	3	5	4	5
Broome	11	5	26	27	3	.....	95	131	62	65	32	63
Cattaraugus	3	.....	12	14	2	1	42	50	9	10	.....	.....
Cayuga	.....	.....	36	41	.....	.....	91	73	14	12	13	17
Chautauqua	5	2	.....	.....	.....	4	1,843	236	115	85	.....	.....
Chemung	1	2	9	3	1	.....	9	1	.....	.....	.....	.....
Chenango	25	12	30	45	.....	.....	18	20	4	10	.....	.....
Clinton	.....	.....	15	9	1	.....	13	16	.....	.....	.....	.....
Columbia	.....	.....	30	7	.....	1	.....	.....	.....	.....	.....	.....
Cortland	2	1	6	5	1	.....	17	20	18	20	10	13
Delaware	4	6	10	12	1	.....	60	55	10	6	4	4
Dutchess	4	2	1	3	.....	.....	125	47	12	10	.....	.....
Erle	9	4	83	47	1	2	14	7	17	18	2	5
Essex	14	7	12	14	.....	.....	25	37	7	13	14	17
Franklin	2	6	10	9	.....	1	2	3	.....	.....	.....	.....
Fulton	.....	.....	6	4	.....	.....	.....	.....	4	4	.....	.....
Genesee	4	.....	10	.....	1	.....	15	9	24	14	19	17
Greene	.....	.....	7	8	.....	2	88	69	.....	1	.....	.....
Hamilton	2	.....	2	.....	.....	1	3	1	4	.....	.....	.....
Herkimer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson	3	1	.....	1	.....	.....	.....	.....	16	19	7	10
Kings	331	297	213	312	3	1	12	13	.....	.....	.....	.....
Lewis	2	1	9	10	2	1	2,417	2,769	.....	1	.....	.....
Livingston	3	.....	20	1	.....	1	52	18	8	4	1	1
Madison	13	7	12	7	.....	.....	41	7	11	.....	9	5
Monroe	.....	.....	50	45	6	5	75	530	250	280	95	125
Montgomery	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York	.....	.....	54	115	9	4	4,473	6,719	888	891	3	3
Niagara	48	85	67	98	.....	1	1,993	2,253	.....	.....	.....	.....
Oneida	.....	.....	89	137	9	.....	883	250	530	491	.....	.....
Onondaga	.....	.....	70	80	.....	.....	280	250	740	779	156	144
Ontario	60	2	61	45	1	.....	141	219	68	74	81	85
Orange	19	25	40	25	.....	1	9	3	.....	25	2	3
Orleans	10	18	28	15	.....	1	20	23	18	12	6	8
Oswego	.....	.....	2	16	.....	.....	17	14	10	13	.....	.....
Otsego	1	.....	40	.....	1	.....	20	12	17	7	.....	.....
Putnam	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queens	.....	.....	24	3	.....	.....	886	67	.....	.....	5	8

H—(Continued).

COUNTIES.	DECREPITUDE.		OLD AGE.		DEAF AND DUMB, OR MUTES.		INDIGENT AND DESTITUTE.		CHILDREN HAVING DESTITUTE PARENTS.		CHILDREN HAVING SICK PARENTS.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Rensselaer.....	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland ..	.....	1	10	6	.....	.....	354	.....	.....	.....	.....	.....
Saratoga.....	9	4	1	3	..	.....	2	.....	8	4	.....	.....
Schenectady ..	.....	.....	66	11	.....	.....	.....	.....	.....	.....	.....	.....
Schuyler.....	1	.....	1	2	.....	.....	50	117	.....	.....	.....	5
Schoharie.....	.....	.....	1	.....	.....	.....	.....	.....	3	.....	.....	.....
Seneca.....	8	4	85	37	.....	.....	171	51	20	8	.....	3
St. Lawrence ..	33	33	85	85	4	.....	163	144	105	168	.....	126
Steuben ..	19	8	56	51	1	.....	210	118	7	10	5	5
Suffolk.....	6	4	10	11	1	.....	4	5	10	9	1	1
Sullivan ..	.....	.....	8	1	.....	.....	45	101	27	24	.....	.....
Tioga.....	2	1	38	36	.....	.....	269	241	17	18	19	13
Tompkins.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ulster ..	20	.....	53	13	2	.....	9	.....	32	8	27	4
Warren.....	3	.....	8	.....	.....	.....	.....	.....	.....	6	2	1
Washington ..	.....	.....	3	.....	.....	.....	54	12	10	16	.....	.....
Wayne ..	15	12	25	10	1	.....	20	10	20	20	10	15
Westchester ..	29	16	20	15	1	.....	58	51	22	18	20	15
Wyoming.....	.....	.....	16	12	.....	.....	59	54	1	1	.....	.....
Yates.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total .....	751	537	1,639	1,496	63	23	14,780	14,950	2,170	2,680	635	679

[illegible]



## H—(Continued).

COUNTIES.	FEMALES HAVING SICK HUSBANDS.		ORPHANS.		BASTARDS.		ILLEGITIMATE CHILDREN.		INSANE.		MALES HAVING SICK WIVES.		NOT REPORTED.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Rensselaer .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saratoga .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schenectady .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schuyler .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schoharie .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seneca .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Lawrence .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenben .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Suffolk .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sullivan .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tioga .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tompkins .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ulster .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Westchester .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yates .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total .....	.....	1,644	889	879	193	213	233	113	.....	.....	.....	.....	2,456	3,556

# STATE OF NEW YORK.

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No. 33.

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## IN ASSEMBLY,

May 14, 1873.

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### REPORT

OF THE JUDICIARY COMMITTEE ON THE INVESTIGATION AS TO WHETHER THE PROVISIONS OF CHAPTER 855 OF THE LAWS OF 1868, ENTITLED "AN ACT SUPPLEMENTARY TO CHAPTER 489 OF LAWS OF 1867" HAVE BEEN PROPERLY COMPLIED WITH.

#### *To the Assembly:*

The judiciary committee to which, on the 12th day of February, 1873, were referred the following resolution, to wit:

*“Resolved,* That the judiciary committee be and are hereby authorized and directed to ascertain and report whether the provisions of chapter 855 of Laws of 1868, entitled ‘An act supplementary to chapter 489 of Laws of 1867, and to provide for the collection and application of revenue in the county of New York in certain cases’ have been properly and fully complied with as the public interest involved may require, and, if neglected or evaded, whether willfully, corruptly or otherwise; also, in like manner, to investigate as to the official acts and present status of the commissioners provided for in said chapter 489 of the Laws of 1867, and whether any vacancies to be filled according to law, with power to send for persons and papers, and to report at any time,”

Respectfully report, That the said committee appointed a sub-committee thereof to conduct such investigation, composed of C. P. Vedder, Henry J. Coggeshall and Jeremiah McGuire; that such investigation by said sub-committee commenced on the 27th day of

March, 1873, and continued until the 6th day of May, 1873. That a large mass of testimony was taken, but only a small portion thereof is applicable to the inquiries and subject-matter of the foregoing resolution, all of which, however, is submitted with and accompanies this report. To a full and proper understanding of the questions involved, it will be necessary for your committee to refer to the statutes mentioned in the resolution and the action of the corporators and State authorities thereunder. The West Side and Yonkers Patent Railway Company was organized under the general railroad law, and after the articles of association were duly filed the act of 1867, chapter 489, was passed. The title of this act is "An act to provide for the construction of an *experimental* line of railway in the counties of New York and Westchester."

By the third section of the act, the company was authorized to commence the construction of an elevated railway at the southerly extremity of Greenwich street, in the city of New York, and the same to be extended northerly along Greenwich street one-half mile in length. This was denominated the experimental section. The second section prescribed the mode of structure of the railway, and the motive power, which was to be propelling cables. The third section prescribed the weight of the cars and the manner of placing the stationary engines, and the tenth section required the experimental section to be completed within one year from the passage of the act. Three commissioners were to be appointed, two by the Governor and one by the Croton aqueduct board, whose duties and powers are specifically defined. The commissioners were required to make due inspection and examination of said railroad, its structures and operating machinery. If they approved of such structures, plan *and mode of operating*, and should find that the road with such operating machinery could be run with safety and dispatch, they should make their certificate of approval in duplicate; one copy thereof to be sent to the Governor, and the remaining copy to the mayor of the city of New York. If the Governor approved of such certificate, the same was to be filed in the office of the Secretary of State, and thereupon the said company was then, and only then, authorized to extend its road westerly to the Harlem river.

This act of 1867 was amended in 1868, chapter 855 of the Laws of that year, and the only amendment made material to this inquiry is contained in the first section, viz.: the time for the construction of the experimental section was extended six months, and then enacts:

“And it shall be lawful for experiments to be made in different forms of application of the propelling cable, or other motor, upon such railway, and for the constructing company to adopt such form or motor as the commissioners shall, after due experiments, recommend or adopt.”

Under the law of 1867, the Governor appointed as commissioners, Freeman J. Fithian and John H. Morris, and the Croton board appointed Jacob S. Freer. These commissioners on the 1st day of July, 1868, made their certificate or report to the Governor, as required by the act of 1867, in which they certify that they had frequently and duly inspected and examined the said railway, its structures, plan, and mode of operating the same, and approved thereof, and did find that the said road could be operated with safety and dispatch. On the 2d day of July, 1868, the Governor approved of said certificate, and the same was duly filed in the office of the Secretary of State. The foregoing is a brief statement of the legislative enactments, the action of the Governor and of the commissioners up to that time.

It appears from the evidence taken by us that the motive power which the commissioners approved was the propelling cable, the approval of which gave the company the right to extend its road to the Harlem river. This power was used, and experiments made until February, 1871, when it proved to be a failure; dummy engines were then substituted as the motor, two of the above commissioners making a certificate that such power was preferable to that of the propelling cable. The dummy engines are still in use upon said road, but before the use of said engines the road had been completed to 30th street, a distance of about three and a half miles. During the intervening period from 1868 to 1871, the inventor, C. T. Harvey, Esq., who had the general management of the road, experimented with different kinds of machinery respecting the propelling cable, perfecting said machinery in an endeavor to demonstrate that propelling cables were a safe and proper motor. These experiments, like all new inventions in complicated machinery, were necessarily expensive, and the projectors, instead of realizing a profit upon their capital, suffered a corresponding loss.

The company became involved in its pecuniary transactions. Judgments were obtained and a sale of the property was had under the executions issued upon said judgments. Also a foreclosure was had and a sale under the judgments upon a trust mortgage given to secure mortgage bonds.

The purchaser or purchasers at said sale organized a new company, and after such reorganization the dummy engines were substituted as the motive power. Whether the foreclosure proceedings were irregular, or whether such proceedings were fraudulent, collusive or oppressive, or what the object, design or purpose of said foreclosure was, your committee did not deem it within their province to inquire. But they may be permitted to say that no evidence was adduced to show such proceedings to be fraudulent or collusive, or a departure from the strict legal course which the parties instituting such proceedings had right to pursue.

The only question which your committee deem worthy of consideration is, whether the experiments have been made with the propelling cables as a motive power, and what effect should be given to the commissioners' certificates.

It is too evident to be questioned, that the law of 1867 required, exclusively, experiments to be made upon the half-mile experimental section with the cable. The title of the act is an "experimental line" of railway. All of the provisions of the act confirm this. Upon the success of the experiments upon this section with the cable depended the existence of the company, or rather its right to continue its road northwardly, and the right to the half-mile structure. If the certificate of the commissioners was adverse, the law required the structure to be renewed.

In 1868, in the amendment to the original act, the commissioners were authorized to adopt and approve a motive power other than the cable; and if approved, the constructing company were authorized to use such other power. It will be seen that this certificate of another motor by the commissioners did not make it obligatory upon the company to use it. By the first act, the company could use no power other than the cable; by the amendment they were authorized, or it should be lawful to use other power, provided the same was approved by the commissioners.

After the passage of this amended act, and when no power had been used or thought of except the propelling cable, the commissioners, as was their duty, and in conformity to the statute, made their report and certificate to the Governor of the State and mayor of the city, approving not only of the structure but also the "operating machinery," to wit, the propelling cable; and the time was extended six months to enable the company to complete the structure, continue the experiments, and afford time to the commissioners to properly

and duly inspect and examine the same. In fact, they certify to the Governor that they had made frequent inspections and examinations.

Now a most serious and embarrassing question arises—whether after such certificate of approval upon which the Governor has acted, and upon which the life of the company depended, the commissioners could say, in a subsequent certificate, that the cable, as a propelling power, was a failure; that the road could not be operated therewith, and the only power competent to use was the dummy engine; whether by the exercise of the power as set forth in the first certificate was not speed, and as to such power whether the commissioners were not *functus officii*? There seems to be no authority in these statutes authorizing these commissioners to make a second certificate, or any certificate in respect to the matters here referred to, except the one to the Governor and mayor.

On the part of the company, and the distinguished counsel who represented it before us, it was claimed that, by a fair interpretation and construction of the law of 1868, the commissioners were not restricted in the approval of motive power to the additional time mentioned in that act; that the restriction of limitation of time simply applied to experimental tests, but that at any time after the expiration of the six months it was competent for the commissioners from time to time, as a new motor might be discovered which, after due experiment, had been tested, to approve of the same, and then it should be lawful for the constructing company to adopt such form of motor.

Although your committee cannot fully appreciate or readily adopt this construction, for the reason that it is conceded that there is in the act a limitation of time in which the experiments are to be made, and no motor can be adopted until after due experiment made. How the commissioners can adopt a motor tested after the lapse of the time prescribed for the making of experiments, when they are specially restricted to an approval of a motive power after due experiment, your committee cannot see. It would seem that the words “due experiments” necessarily referred to the experiments mentioned in the preceding part of the section, and these experiments were to be made within six months.

But your committee do not feel constrained, in fact they do not regard themselves as authorized, by the terms of the resolution to pass upon the construction of this law as the force or effect of the second certificate of the commissioners or what rights the company acquired by

reason thereof. They can only call the attention of this body to the fact that legal doubts of a very serious character exist in regard to the status of the company in the use of the motive power now applied in the operation of its road, which might lead to protracted litigation, resulting injuriously to the company, which doubt ought to be settled by legislation. As your committee are not required by the resolution to make any recommendations as to legislation or otherwise, we can only submit the testimony taken, and our views thereon, and leave the subject to the judgment and discretion of the Legislature to adopt and apply such corrective measures as the public and the interests of the company demand. Your committee, however, are of the opinion that the motive power now in use is preferable to that eliminated by the experiments referred to, would give an assurance of the merits of the motive power, and inspire public confidence in its utility.

As to the latter part of the resolution, that the present status of the commissioners be investigated and to ascertain whether any vacancies exist, it appears that Commissioner Morris has resigned; as to him a vacancy exists. It is claimed that a vacancy exists as to Commissioner Freer, upon the ground that he received his appointment from the Croton aqueduct board, and by the 77th section of the charter of 1870, the terms of office of the several persons holding office, position or employment under said board should cease within five days from the passage of said act.

Your committee are of the opinion that this provision of the statute only applied to that class of persons who held office under said board, and whose duties were immediately connected with the administration of affairs. That it has no application to a person appointed by said board under a special statute, where the board was merely the appointive power, but whose duties were entirely disconnected with the affairs of the board. We are, therefore, of the opinion that there is no vacancy in the case of Commissioner Freer, and that he is a lawful acting commissioner.

We also report that the five per cent required to be paid into the treasury of the city has been duly paid. That there has been no

the commissioners or other persons connected with the road.

L. BRADFORD PRINCE,  
F. W. TOBY,  
WILLIAM HERRING,  
DAVID C. VAN COTT,  
CHARLES CRARY,  
SEYMOUR DEXTER,

*Committee.*

C. P. VEDDER,  
H. J. COGGSHALL,  
JEREMIAH MCGUIRE,

*Sub-committee.*





# TESTIMONY.

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MARCH 27, 1873.

C. T. HARVEY, sworn.

By STEPHEN O. JENNINGS :

Q. Where is your residence? A. I have lived in Tarrytown, New York, since 1865.

Q. What is your occupation or principal business? A. I am a manufacturer of iron, and am engaged in mining; am president of a furnace company.

Q. Are you a civil engineer? A. I am an amateur civil engineer; was not educated in the practical practice of that profession, but have superintended large public works as superintending engineer.

Q. What has been some of your engineering experience? A. I had charge of constructing the St. Mary's ship canal at the outlet of Lake Superior, and received the thanks of the corporation for the manner in which I discharged that duty; I was appointed general agent of that company; but in a controversy with the United States engineers, I demanded an experiment as to the best mode of accomplishing that work; the experiments proving my theories correct, I was promoted to be the chief constructing engineer.

Q. Have you had experience as a mechanical inventor? A. I have made quite a number of inventions, mostly in connection with manufactures; but when in charge of the construction of the canal before mentioned, I invented and constructed a novel form of cofferdam, which proved an entire success, in a position where three previously built by the government engineer had succumbed to the immense pressure involved in breasting the waters of Lake Superior; I also invented and successfully applied a machine for excavating rock submerged under ten to twelve feet of water, in a case where several thousand yards existed in such a position that two former State engineers of this State, and the most prominent engineer of Massachusetts, were convened in this city, as experts, to decide on the best mode and the time and expense necessary for its removal. Their estimate was, that six months' time and \$100,000 would be

necessary ; before their report reached me, my machine had removed it all in less than sixty days, and at an expense of less than \$5,000, which was pronounced by them one of the most remarkable engineering feats ever accomplished.

Q. Have you been connected with railroads ; if so, when and where ? A. In 1856, I was appointed the acting director in charge of the surveys of the northern division of the Chicago and North-Western railway ; in 1861, I was the vice-president and controlling owner of the Peninsula Railway, since consolidated with the Chicago and North-Western railway. The next railroad that I had to do with was the Elevated railway, as constructed in Greenwich street, New York city.

Q. You state that the Elevated railway in Greenwich street, in the city of New York, is the latest railway enterprise with which you have been identified ; what has been your official or business connection with it ? A. I was appointed chief engineer, with sole control of the construction department, and' also vice-president and manager, which included the financiering and general promoting the enterprise. All the funds were deposited subject to my order or countersign ; and all the laws passed, or contracts entered into, were drafted or revised by myself, as the executive officer of the corporation, from 1866 to 1870, nearly inclusive.

Q. How much of it was built under your supervision as chief engineer ? A. All of its present main line.

Q. How much of the actual capital was paid in under your financial management as its vice-president and manager ? A. Between eighty and ninety per cent.

Q. Please give a consecutive statement of the steps by which a legal status was conferred on the enterprise, and to what extent ? A. A general act, drafted by myself, was enacted in 1866, under which the first corporation was formed in July of that year, in New York city, for the purpose of constructing an experimental section of elevated railway in Greenwich street of that city, with the right (if that was decided to be a success), of building three parallel lines through the city. The memorial to the common council was signed by twenty-five leading citizens, and an ample cash capital was paid in to inaugurate the experiments. The permission was granted by the common council, almost unanimously, July 31, 1866, but was vetoed by the mayor August 11, 1866. Before the question of overriding or sustaining the veto was reached in the council, the now deposed

Judge Barnard granted an injunction, restraining the council from acting at all on the veto.

The State Senate that year passed a resolution, of which notice was given as follows :

#### NOTICE TO THE PUBLIC.

“ The Senate of the State of New York, on the 20th of April last, adopted the following resolution :

“ *Resolved*, That a select committee of three be appointed to sit during the recess, with the mayor of the city of New York, the State Engineer, and the engineer of the Croton board, to ascertain and report to the Senate the most advantageous and proper route or routes for a railway or railways, suited to the rapid transportation of passengers from the upper to the lower portion of the city of New York, having in view the greatest practicable benefit and safety to the public, and the least loss and injury to the property on or adjacent to said route or routes.

“ The following are the members of the commission :

Senator GEORGE H. ANDREWS,  
Senator HENRY R. LOW,  
Senator CHARLES G. CORNELL,  
State Engineer J. P. GOODSSELL,  
Mayor JOHN T. HOFFMAN,  
Engineer ALFRED W. CRAVEN.

“ At a meeting of the board, held on May 31, 1866, and June 2d, it was resolved that the parties interested be and they are hereby invited to submit plans and specifications, upon the subject embraced in the resolution, to be addressed to the Senate commission on railroads, at the office of the street commissioner, corner of Broadway and Park place, in the city of New York, on or before Wednesday, the first day of August next.

“ The committee deem it desirable that the plans should be accompanied by approximate estimates of expense.

GEO. H. ANDREWS, *Chairman*.  
A. W. CRAVEN, *Secretary*.

“ The time for the reception of plans is extended to the first day of October, by order of the committee.

A. W. CRAVEN, *Secretary*.”

Submitting my plans in person, before that commission, November 15, 1866, I was agreeably surprised to find, on the presentation of their report to the Senate, January 31, 1867, that I was the only engineer or projector of an original plan which was honored with their recommendation, and they officially requested the Legislature to authorize the illustrative experiments which Judge Barnard had suppressed. The whole report is found in Senate document No. 128, of 1867, of which the following is an extract:

“The terms of the resolution under which we were acting, demanded that the plan adopted should possess the elements of speed, safety, cheapness and rapidity of construction.

“It was obvious that a high rate of speed was impracticable upon rails laid upon the surface of streets, and this class of roads was at once dismissed from consideration. There remained the elevated and excavated systems to be considered. Of the former there were two classes; those placed upon supports in the streets, and those running either wholly or partially through blocks and sustained by wood, iron or masonry.

“Among the plans for an elevated railway in the streets, that presented by Mr. C. T. Harvey, C. E., appeared to have been the most carefully prepared, the most free from engineering difficulties involving the question of safety, and the least objectionable as to the application of the motive power. The promoters of this plan ask for the privilege of constructing one-half mile in the northern portion of Greenwich street, as an illustrative experiment; and the commission recommend that permission be granted by the Legislature to that extent.

“A satisfactory synopsis of this plan may be found in Appendix F, attached to this report.

“It is not to be denied that any system which demands the propulsion of cars, at a rapid rate, at an elevation of fifteen or twenty feet, is not entirely consistent in public estimation with the greatest desirable immunity from the dangers of transportation.

The conclusion of the commission may be briefly stated, as follows:

“That commercial, moral and hygienic considerations all demand an immediate and large addition to the means of travel in New York.

“That elevated railways, erected on supports in the middle or on the sides of the present streets of the city, cannot be fully adapted to the transportation of freight, and have never been tested in any prac-

tical way so as to warrant an unconditional recommendation of them for transportation of passengers.

(Signed)

GEO. H. ANDREWS,  
H. R. LOW,  
CHAS. G. CORNELL,  
*Committee of the Senate.*

JOHN T. HOFFMAN,  
*Mayor of New York.*

ALFRED W. CRAVEN,  
*Engineer of the Croton Board."*

The consequence of this high indorsement was the passage of the act of 1867, authorizing an experimental line of railways, etc., in the precise form of a bill which I submitted to cover the case. (See chapter 489 of Laws of 1867.) Before the acceptance of an experimental section, by the State authorities under the Laws of 1867, the Legislature of 1868 was in session. It then seemed doubtful whether the section could be completed by the time contemplated in the first act, and the objection was raised by some investors that in case, *after a fair trial*, the cable system should not prove successful that nothing else could be legally substituted, however important or desirable it might be. To cover these points I drafted a bill, which the Legislature enacted. (See chapter 855 of Laws of 1868.) These are the only laws giving legal status, or regulating this subject which the committee is called upon to investigate.

Q. What clause and section of the act of 1868 have not been complied with? A. Those clauses mentioning experiments as to be made with different forms of the application of the propelling cable and "due experiment" as a condition precedent to the power of the constructing company to adopt, or the commissioners to recommend or approve, any other form of motor than that specified in section two of the act of 1867, which only permitted propelling cables and stationary power. The committee will find on investigation that experiments, in compliance with this law, were repressed, or willfully and illegally suppressed; that the constructing company have never legally adopted, or the commissioners, after due experiment, ever recommended or approved, any other form of motor than that designated in the act of 1867, and, therefore, that any other form of motor is, at the present time, unauthorized and illegal.

Q. Is it probable that the cable and stationary engines are the best form of motive power for city elevated railways? A. It is admitted to be by the highest engineering authorities, and the most eminent engineers; the committee will find this fact stated in so many words in the text-books used in most of the colleges of this country, by referring to page 431 of the ninth edition of Professor Gillespie's Manual of the principles and practice of constructing railroads, which is as follows:

"A railroad worked by a stationary engine would be the most convenient method of relieving the rush of travel through Broadway. The railroad track should be supported on iron columns, out of the way of carriages, as in the figure. These columns might be placed on the edges of the sidewalks, where now are the lamp and awning posts; and by extending over the gutter they would have a base of three feet. Their lower extremities should be set in heavy masses of masonry. At top they should spread outward a foot on each side, which would give sufficient width for the railroad track. The columns should be set at distances of fifteen or twenty feet, and connected by flat arches. There would be no flooring over the street, and the rails would intercept no more light than do the boards which now connect the awning posts. No locomotives, or even horses, would pass over the road; but an endless rope would continually run over pulleys, and light cars would be under the most perfect control, and could be attached to it, or disengaged, at will, and stopped more easily than an ordinary omnibus. At the upper end of Broadway, a stationary engine, or the water power of the Croton, would easily and cheaply keep up the circulation, which would pass up one side of the street and down the other. At each corner might be a platform, to which there would be a short flight of steps from the sidewalk, the ascent of which would be very easy; or a certain number of corner houses might be used as depots, so that passengers might step into the cars from their second story windows. A railroad on the surface of the ground, with its continual stream of cars stopping up the cross streets every minute, would create a worse evil than that it was intended to remedy, and an endless rope could not be applied to it. If a railroad were made through a secondary street, passengers would not generally leave Broadway to avail themselves of it. A surface railroad being thus out of the question, two alternatives remain. The underground one will find few advocates; and the only feasible arrangement seems to be the

column and endless chain system." Also the following opinions are pertinent:

"The Elevated Railway and endless cable system received the indorsement of the special committee of the Mechanics' Institute, who examined the plans and working model, and say in their report (March, 1848): 'Their doubts of the practicability of such a plan have been removed. Every objection which the ingenuity of your committee could raise has been met, and your committee has been irresistibly compelled to agree that this plan furnishes all the desiderata which the necessities of Broadway, and the convenience of our citizens demand.'

"FOR RAILROAD COMMITTEE OF THE SENATE OF THE STATE OF NEW YORK:

"ALBANY, *March*, 1866.

"Having examined drawings and models of an elevated railway on which the cars are to be propelled by means of a cable or wire rope attached to a stationary engine, we are impressed with the novelty and practicability of the method proposed, and think it worthy of a suitable enabling act from the Legislature, to permit the formation of companies to use it, and also of the attention of capitalists in reference to the actual construction of the same.

I. P. GOODSELL,

*State Engineer of New York.*

WILLIAM B. TAYLOR,

*Ex-State Engineer of New York.*

AMASA STONE, JR.,

*President C. and E. R. R.*

ERASTUS CORNING."

To the above was also attached the following:

"OFFICE CROTON ACQUEDUCT,

"NEW YORK, *March* 9, 1866. }

"I have examined a model (as above referred to) shown to me by the patentee, and think his arrangement *much superior* to any other plan I have seen, on inclined planes and other localities where stationary power is used.

E. W. CRAVEN,

*Chief Engineer Croton Aqueduct."*

The eminent mechanical engineer, George H. Sellers, Esq., whose opinion is second to none in this country, was consulted by me recently, and gives the following opinion:



“ OFFICE OF THE EDGE MOOR IRON COMPANY,  
 “ ELLERSLIE STATION, P. W. & B. R. R.,  
 “ EDGE MOOR, *April 8th*, 1872. }

“ GEO. S. COE, Esq., *New York*:

“ DEAR SIR.—Some time since I, at the request of Mr. C. T. Harvey, addressed a letter to you stating that, in my opinion, the best plan for rapid transit in New York was a system of elevated railways, and that the best form of motor would be found in the endless cable.

“ Mr. Harvey has this day submitted his new machinery for grasping the endless cable, and with some slight changes in construction, which do not affect the general idea expressed, am free in saying it is the most likely form yet developed, and will realize the best result.

“ Yours respectfully,

“ GEO. H. SELLERS.”

Stevenson, the great English engineer, was of the same opinion; Peter Cooper, Esq., in a letter published last month, addressed to Senator Tiemann of this Legislature, advocates that system, to use his own words, “ as the cheapest, safest and most practical means of moving a vast amount of persons both ways at the same time;” I became satisfied that such was the fact, in 1865, before I knew of the opinions quoted, and have never changed my mind in this regard.

Q. To what extent had experiments as to the best motive power for city railways been made, and when and by whom were they suppressed, within your personal knowledge? A. I determined to solve that problem, and made my first plans in 1865; in 1866, the first corporation was formed to enable the experiments in New York city; in 1867, the Senate recommended my plan, and the Legislature authorized an experiment of it, subject to the inspection and approval of certain commissioners and the Governor.

In 1868 the commissioners and Governor were propelled over a half mile section satisfactorily by cable machinery, and formally approved of it according to law. During 1869 experimental trips were made over the same section, while three miles of the extension were being constructed.

The following was given Tuesday, April 1, to Thirtieth street as at present built: One of the most eminent engineers of Europe rode over the first experimental section incognito, and on his return home recommended it so strongly to his friends as being sure to succeed, with that form of motive power, that one or more of them remitted a large sum of money, some \$30,000, to be invested in it, which was

done through a well known railroad president, who told me of the recommendation and its effects, but withholding the engineer's name. During that year a quartette of Wall street operators offered to furnish capital to finish the railway to Thirtieth street, and to enable me to complete my experiments as to the best form of motor, on certain terms and conditions, partly in writing and partly verbal, which conditions were all complied with by the constructing companies and on my part, and all evaded more or less, or repudiated *in toto*, on their part. Early in 1870 I exhibited cars running successfully in scores of trips by this cable motor, to and from Thirtieth street, conveying some 25,000 persons without accident to life or limb. I proposed to remedy certain defects of material and arrangement so as to enable the railway to be operated with a profit by that motor, and then to prepare for a change of form of the application, which was evidently the only thing required to attain the best possible form of motor for the railway in the streets. It was at this juncture that the parties alluded to repudiated both their verbal and written obligations, and endeavored to prevent the experiments previously agreed upon. They first withheld the promised funds, and then publicly ridiculed and misrepresented my efforts and the merits of the enterprise, so as to injure the credit and reputation of the railroad and myself. Notwithstanding these repressive measures, which commenced about March, 1870, I found means, by borrowing of my friends and by mortgaging my private property, to prosecute some of the intended experiments, on a limited scale, at intervals during that season. I changed the form of cable on the original or experimental section, preparatory to a new experiment, as soon as a car could be provided suited to the purpose, and also began to replace certain defective materials, which were the source of most of the difficulties of operating the railway at that time.

I also concluded to open it to public use so as to have the earnings aid in the expense of said improvements. I stated my plans to such of the directors and stockholders as I came in contact with; some of whom lent money to aid in my measure; among whom William S. Woodward, L. A. S. Barnes and S. M. Pettengill should be mentioned as evincing sympathy with my embarrassments by privately advancing several thousand dollars toward that object.

**"OFFICE, WEST SIDE ELEVATED RAILWAY COMPANY,  
"48 CORTLANDT ST., NEW YORK, Feb. 7th, 1870. ;**

**"HON. MOSES H. GRINNELL, Irvington :**

**"MY DEAR SIR.—**Expecting to leave home to-morrow on a trip to Europe, to be absent for an indefinite time, I shall not witness the inauguration of the Elevated railway, in which I have taken a deep and active interest and invested more money to aid it, I believe, than any other individual.

**"I expect that, with due allowance of time for gaining experience in its operating arrangements, it will prove an invaluable convenience to yourself and other residents along the Hudson river.**

**"Whenever you and they come to such conclusion it will be well to bear in mind the fact that the result is due, originally, to the efforts of Mr. C. T. Harvey of Tarrytown, who has for four years steadily prosecuted the enterprise in the face of more obstacles and opposition than is probably known to many beside myself.**

**"He risked the matter of personal gain entirely to the eventuality of success, and then for a share in the stock, which must become convertible, to be available.**

**"It will be a good idea if such large property owners in Westchester county would show an appreciation of such public spirited efforts by subscribing to some of Mr. Harvey's stock for the express purpose of having him reap some immediate results from his labors, and feeling that there is a substantial reward for merited success in such an important improvement.**

**"I know that liberal ideas in such matters will prompt some suitable steps to be taken, and make the suggestion, leaving it to yourself and others to act upon it as seems best.**

**"Respectfully yours,**

**"D. N. BARNEY."**

Subsequently the following gentlemen indorsed Mr. Barney's letter, thus :

**"We concur in the foregoing suggestion of Mr. Barney, and trust it will meet with a liberal response from those interested in better transit to Westchester county, who have not, like ourselves, risked thousands in the railway experiment referred to.**

**"R. P. GETTY, Yonkers.**

**"WM. H. APPLETON, Riverdale."**

**"Having ridden daily for the past week on the road, I am fully confirmed in my views that it will yet prove a great success and of vast value, and convenience to those residing in Westchester county, and though I have already invested largely in it, I am happy to aid in this effort to reward Mr. Harvey, but for whom it would never have been brought to such a fair state of success, and though unasked, I add my name for five hundred dollars.**

**"W. E. DODGE.**

**"TARRYTOWN, July 1st, 1870."**

## TIME TABLE.

Cars leave Twenty-ninth Street station '6.30 A. M., and at hourly intervals until 5.30 P. M.,

Arriving at Twenty-second Street station 2 minutes later.

"	Bethune	"	6	"
"	Houston	"	10	"
"	Franklin	"	15	"
"	Dey	"	20	"

Cars leave Dey street at 7 A. M., and at hourly intervals thereafter up to 6 P. M., and way stations at above difference in time.

Fare 10 cents. Artisan trains 5 cents.

## RULES.

To accustom brakemen and engineers to the regular routine operating of the railway, full stops will be made at the way stations, although the platforms are not yet provided for regular use, but will be soon.

One car will leave five minutes in advance of regular time if all seats are occupied, and the last car will leave five minutes after time if vacant seats then remain. Each train of three cars has accommodation for 120 passengers.

Cars leaving before 7 A. M., and next after 6 P. M., will be known as artisan trains at half fare, or five cents, until further notice.

## REMARKS.

Over 20,000 passengers have already been conveyed on this railway without injury to one of them. This result has been due to the great care in testing the structure and proving it safe beforehand.

Its safety having been unquestionably proven, its certainty and celerity only remain to be perfected by regular use. Every fare paid encourages improvement in these regards, and all who desire quick transit in New York city are now invited to aid in the rapid perfection and certain success of this pioneer enterprise.

T. GEREHART,  
*Acting Superintendent.*

On opening the line on the 14th of November, 1870, it was crowded with passengers, and I was intending immediately to double its capacity by adding cars and turn-outs; when, on the 15th of November, 1870, Mr. J. F. Tracy and the president, W. L. Wallace, came in person to the office, before my arrival in the morning, and caused a sheriff's sale to take place of all the franchises and property of the company, on judgments against it obtained by their collusion, for a sum less than \$1,000, when said Tracy's written obligation for a much larger sum was then laying in the company's

safe overdue and unpaid. By authority of the deputy sheriff, in the name of the pretended purchaser, — Towes, they, Tracy and Wallace, were put in possession, discharged the employes, stopped the cars, and forced the railway into disuse for a period of over six months, thus forcibly preventing my pursuing the experiments required by law any farther at that time, although they knew that the same would not interfere with any other experiments they might wish to make with dummy engines or any other known motor. Subsequently, in 1871, I offered to fit up a car at my own expense, with the cable machinery, then all ready on the original section, and the largest stockholder in the original company promised me that I should have the opportunity on those terms, but when the proposition came to the knowledge of the clique, of Tracy and associates in control, they caused all the motive machinery to be removed without notice to me, and thus the matter stands at the present day. .

Q. Who were the persons making the verbal and written promises to which you refer? A. John F. Tracy, David Dows and Wm. S. Woodward, of New York; Wm. L. Scott, of Erie, Pa.—sometimes styled “The Rock Island Clique,” in allusion to some sharp practices connected with that corporation and stock.

Q. What were the terms of the written propositions? A. The following is a certified copy of the same :

“OFFICE WEST SIDE ELEVATED RAILWAY COMPANY,  
185 GREENWICH ST., NEW YORK, 18th Oct., 1869. }

Mr. C. T. HARVEY, *Vice-President* :

DEAR SIR.—In reply to yours, 16th, say, so soon as E. W. Dunham, David Dows and John F. Tracy are elected members of your board, and sufficient of the preferred stock placed in trust with Mr. Dunham, we propose to loan your company two hundred thousand dollars, if necessary, to complete the line to 30th street. We beg to express our high respect for Mr. Barney, president, with the hope, that he will continue in that position, notwithstanding the proposed changes in the board.

Very respectfully,

J. F. TRACY,  
W. S. WOODWARD.

The above is a true copy of letter on file in this office.

(Attest)

H. W. TAYLOR,  
*Secretary.*”

Q. What was the nature of the verbal agreement? A. It was that I should deposit my own stock, and secure a deposit of most of my friends' stock likewise, in trust with a person of their selection, with voting power, by which they would be assured of the control of the corporation and its affairs so long as their loan remained unpaid; in consideration of which, Mr. Tracy, in behalf of his associates, promised me all the opportunity and funds which I deemed necessary to complete experiments as to motive power, with a single provision, that I should, on or before the first of April, 1870 next, demonstrate that a car could be run from Cortland street to Greenwich street, within fifteen minutes, by cable and stationary power. I stipulated for an allowance of fifty thousand dollars for these expenses, in addition to their written stipulation to furnish \$200,000 if necessary, for the construction of the work to 30th street. Mr. Tracy said that he would not only furnish that extra sum, but would double it, if necessary, to solve those questions about the motive power to my satisfaction, and would allow me six months' extra time for their conclusion.

Q. Did you comply with these conditions? A. I did in every particular. About the 15th of February, 1870, or nearly six weeks ahead of the stipulated time, Mr. Tracy himself rode over the route in fourteen minutes by his own watch, and in testimony of my having fulfilled what he said he had no idea I could do, tendered me an order on his tailor for a new suit of clothes, as having lost a wager between us; I, however, never availed myself of the order. The stock of myself and my friends was also deposited in trust, as agreed, with Mr. E. W. Dunham, named as trustee. Mr. Dunham voted on it at two annual meetings, electing Tracy and his friends as majority of the directors, and myself as one of the minority. After his death, in 1871, the notice of the annual meeting was changed, so that I received none as usual, and did not attend that of 1872, but was informed that David Dows appeared and claimed to represent my stock, instead of the deceased trustee, and with it voted me out of the board for the first time since its organization. This act, as illegal as it was discourteous, was an example of numberless other similar proceedings by the parties holding the control, and using it unblushingly against the interests of those whom they were in honor bound to protect.

Q. Does the trust still exist? A. I suppose not, but the finale is worth mentioning, as in keeping with all the other transactions of

that clique. In 1872, their present confidential agent, J. A. Cowing, met me, and offered an instrument of relinquishment of the trust for my signature; he stated that after it was signed by the parties I could obtain the certificates belonging to me, by calling at the Corn Exchange Bank, where I had previously deposited them. Accordingly, in a few days I did so, only to learn that he on filing the release, had taken them away with him. Addressing a note by mail, to ask him for an explanation, and to inform me where my property could be found, no notice was taken of it, and I am still without my certificates.

Q. What inducements would there be for the parties who thus obtained control, through you, to prevent the experiments, which you had been promised by them? A. The profits of a raid on the interests of the stockholders and creditors, and also the gratification of fulfilling vindictive threats against myself for non-compliance with their subsequent plans.

Q. How could a profit be made out of the stockholders and creditors? A. By bogus sheriffs' sales and collusive foreclosure suits, where the person purporting to be trustee for the bondholders was in fact a hired tool to depreciate the market value of the property as low as possible, and then buy it in for the clique, in such a way as to cut off unsecured creditors and stockholders, including myself, without any residuum of value to us whatever, or by inducing the duped, secured creditors to accept a reduced interest in a new organization, to be formed on the spoils of the old company, with an admixture of new capital, manipulated in such a way that the manipulators would own a controlling interest at a low cost.

Q. What would the profits in this regard amount to? A. In the reduction of the cash cost, at a minimum estimate including interest for three years, over \$700,000, also by adding in claims for contingent profits and other stock of that class, a cash value of at least \$100,000, making a total of over \$800,000, valuing the property of franchises at what the manipulators and their associates were privately estimating the same as worth at the time.

Q. How much additional investment would the controlling parties have to make to secure that as the minimum profit? A. Nominally twenty per cent of the bonded debt on \$150,000, but in reality probably not one-third of that amount. To illustrate: I will submit to the committee two official letters of their hired manipulator, J. A. Cowing; the first, under date of Sept. 18, 1872, is addressed to a widow lady



living at Utica, N. Y., who held \$1,500 of the first mortgage bonds, with unpaid interest for three years, amounting to \$315 more, or \$1,815 in all; it will be seen that said Cowing informs her that in a few weeks he will probably be able to pay her \$165 in final settlement of a trustee's sale of her property, or less than nine per cent; but he adroitly informs her that if she acts promptly she might get \$400 of new stock instead of the \$165, by sending him \$25 additional in cash, beside her securities. In another letter, dated Dec. 4, 1872, to a merchant in New York city, whom he was anxious to conciliate, he offered some of the same stock at the rate of ten dollars in cash per share, which offer was however declined.

At this valuation the widow would realize just fifteen dollars cash value for her \$1,815 of first lien securities, and yet the stock really cost nothing to those offering it. It was simply returning her own property to her in such shape that she had only a much smaller fraction of the whole, with the power, on the part of the manipulators, to water that indefinitely. The following are the letters referred to:

#### EXHIBIT A.

*(Copy of letter to bondholder.)*

"THE NEW YORK ELEVATED RAILROAD COMPANY,  
SECRETARY AND TREASURER'S OFFICE,

COR. DEY AND GREENWICH STS., NEW YORK, Sept. 18, 1872. }

MRS. G. H. MAYNARD, 3 South street, Utica, N. Y.:

MADAM.—Yours of 17th received. The mortgage given to secure the payment of the class of bonds of the West Side Elevated Railway Company, of which you hold three, has been foreclosed and the property was purchased by the company named at the top of this page. You are entitled to your pro rata of the net proceeds of that sale when the matter is closed, which may be the case within a few weeks. Settled in that way you will get less than \$180, probably about \$165, for your three bonds with coupon of February, 1869; and all later ones attached, which is something less than sixty dollars, probably fifty-five dollars, for each bond in cash.

The parties constituting the new company, who have purchased the property, will now allow you to unite with them and put in your bonds upon the same terms they and all others put in their bonds of the same class.

If you elect to do this you can send your bonds and twenty-five dollars in cash to me and I will send you \$400 in the stock of the new company. I will give you, or any one calling with a line from you regarding it, all further information in my power to give. *Your rights* to your pro rata will, of course, remain good, but this *privilege* to unite is liable to be withdrawn at any time. If you do not attend



to the matter soon it will be assumed that you decline to unite in the new organization.

Respectfully yours,

J. A. COWING,  
*Treasurer.*"

"I do hereby certify that the foregoing is a true copy of the letter submitted.

(Attest.)

L. G. SWEET,  
*Clerk Committee.*"

### EXHIBIT B.

"THE NEW YORK ELEVATED RAILROAD COMPANY,  
SECRETARY AND TREASURER'S OFFICE,  
COR. DEY AND GREENWICH STS., NEW YORK, Dec. 4, 1872. }

GEO. L. TRASK, Esq.:

DEAR SIR.—If you will date and sign the inclosed paper bring it and the Taylor check for \$100. I will deliver you scrip for one share original stock in this company, and then an additional share of the same on payment of ten dollars.

As we issue no fractional shares this seems to be the best way to settle this, so far as you are concerned and as you understand the situation.

Respectfully,

(Signed.)

J. A. COWING,  
*Treasurer.*"

"I do hereby certify that the foregoing is a true copy of the letter submitted.

(Attest.)

L. G. SWEET,  
*Clerk Committee.*"

Q. What became of the stock interest under the reorganized scheme? A. It was claimed to have been wiped out entirely; some cases of peculiar hardship came to light in a class of stockholders who paid in \$200,000 in cash in order to try the experiments; for instance, a portion of the marriage settlement of Gov. De Witt C. Clinton upon his daughter was invested at par in cash in this stock at a time when Mr. J. F. Tracy, although solicited by me in person, declined to invest on account of the risk; at a later date, when the investment was a success and could be sold at twenty per cent premium, he (Tracy) took control, on deceptive promises, and systematically depreciated the value of the enterprise until the widow's stock was claimed to be legally confiscated *in toto*; she has since died in straitened circumstances, having previously asked her friends in this

common stock, although not paid for in cash, represented valuable services; when the bond to the State for \$500,000, required by chapter 489 of the Laws of 1867, had to be filed before work of extension of the railway could be resumed, not a director of the company, but myself, would sign it under any circumstances; finally, several persons did become obligated upon it in consideration of an allowance of \$5,000 each in common stock, which was a low rate for the service; their obligation now remains valid, but their compensation is cut off. I could multiply instances of this kind by the score.

Q. Why were the controlling parties vindictive toward you individually? A. Because after they found in the early part of 1868 that it would be more difficult to dislodge me than they expected, they proposed to me, through one of the directors, to obtain my connivance at their intended raid on the stockholders, without my appealing to do so, and offered me a written guaranty, that in each case my stock interest would remain unharmed, as I could have the same percentage in the reorganization. On my declining to do so, because I esteemed such proceedings as highly dishonorable on my part toward those who had heretofore honored me with their confidence, I was warned that I would lose all my stock interest by standing out, and would, also, never have an opportunity to perfect my mechanical motor experiments on the railway, as promised. The result of my obstinacy was developed, when they went into the extreme and reckless measures of the sheriff's sale, and subsequent foreclosure sale, none of which I am advised will stand the test of a judicial investigation.

Q. How many unsecured creditors are cut off, and how large the claims in the aggregate? A. By an official inventory, made in 1868, there were about 100 tradesmen and dealers, having claims to the amount of about \$19,000. To five or six salaried employers, including myself, there were balances due of about \$6,000 in all, which are now unpaid; in the case, of assistant manager S. O. Jennings, and assistant engineer Spengler, involving cases of such aggravated swindling by rich operators, as deserves special investigation by this committee.

Q. Do you consider the evasions and neglect of the provisions of the law of 1868, on the part of the parties now in control of the elevated railway, to have been willful and corrupt, within the meaning of the resolution ordering the investigation?

[Assembly No. 33.]

## EXHIBIT M.

"NEW YORK, October 19, 1870.

WM. L. WALLACE, Esq.,

*President West Side Elevated (Pat.) Railway of N. Y. city:*

SIR.—The recent action of the directors of your company (at meeting of 10th instant) whereby the operating expenses, on resumption of business on the railway, are to be assumed by myself as the representative of the contractor, as well as that of their last meeting of the 15th instant, when the matter of special deposits was referred to yourself with power, etc., leads me to request your official action and instructions to the treasurer on a basis submitted, as follows:

I hereby propose (as attorney for the contractor, etc.) that the new account to be opened in the American Exchange National Bank be styled The Special Trust Deposit Account W. E. Railway, and that to it the gross earnings of the railway be paid in daily, during the term of the contract of August 10th last with Geo. H. Sellers, together with all special loans for operating expenses, or facilities to the repayment of which the traffic receipts shall have been pledged; that checks on such deposit account be signed jointly by the treasurer of your company and the attorney or authorized agent of the contractor (or assigns), upon vouchers certified by said attorney, and recorded under appropriate classification by said treasurer, which under the recent order of the board is to be the only responsibility to be assumed in the matter by any officers of the company, and is agreed not to involve any financial liability to said corporators in the management of said bank deposit.

I wish also to notify you, as a matter of reference, that in case legal questions hereafter arise as to the validity of the acts of the corporation in carrying into effect the agreements of its directors or stockholders in contract herein referred to, and any further instrument of lease or otherwise becomes requisite to give binding force and effect in the opinion of the counsel of your company or of others learned in the law, I shall apply to you to execute and deliver such further written assurances or instruments as may be found necessary in that regard.

Very respectfully,

CHAS. T. HARVEY, *Attorney, etc.*"

"NEW YORK, October 19, 1870.

The proposal of the within letter is agreed to and the treasurer is authorized to act as trustee in opening accounts and signing checks as specified, and is to notify the president and cashier of the bank of the nature of the deposit and trust in usual manner.

W. L. WALLACE,

*President West Side Elevated Railway Co."*

“WAGES AND RISK AGREEMENT.

This memorandum of agreement witnesseth that I have, on this .....day of....., 187 , engaged my personal services in the capacity of.....for the compensation of wages at the rate of.....per day (deducting any proper hours of non-service), to be paid me weekly, by.....as my sole employer, with the option to him of terminating this engagement at any time, on full settlement, and to myself of quitting on a week's notice to him, or if my wages remain unpaid for ten consecutive days. In case of employment on the West Side Elevated railway in New York city, I am to be subject to his directions solely, and in consideration of one dollar duly paid and other advantages to me by this engagement, I agree to assume all risk and effect of any accidental or other injury to my person or property sustained in connection with said railway, without recourse to the corporate or individual owners or officers of the same in any wise, or to my said employer, except for wages due under this agreement.

[Stamp] .....”

“The above is a true copy of the original letter on file in the office of the West Side Elevated Railway Co.

[L. s.] (Attest.) H. W. TAYLOR, *Secretary.*”

EXHIBIT N.

“November 23, 1870.

W. L. WALLACE, *President:*

DEAR SIR.—On the 24th of last month, I addressed you a letter, urging you to investigate the subject of a suitable experimental dummy engine, as a guarantee of success to the elevated railway in some form, and offering to aid in your plans ‘so far as consistent with a fair trial of the present cable system.’ I have underscored that quotation of my original letter, because it referred to an understanding between us, had in the conversation referred to in my letter above specified, that I was to proceed at once to make fair trial of the cable system as authorized by the directors, October 11, which it was mentioned between us would require sixty days probably of running time. On the second day of my having the railway ready to run, the operation of the cable plan was stopped summarily, by the preconcerted plan of one or more of the directors of this company, without notice to me, and, under all the circumstances, in as insulting a manner as could well be devised. I accept the intimation in the spirit in which it was given, and leave the responsibility of the act with them to whom it belongs. I will not dwell on the fact of such action being in direct contravention of the understanding between you and myself; I assume that the step was not contemplated by you at the time, and that your agency was simply in the line of what

you deemed your official duties. I now consider it my duty to withdraw my recommendation of the trial of a dummy engine, for reasons I will briefly state:

First. Because I found that the statement of a recent assistant of the railway, made to the directors, that the cable guides were insecure and unreliable; was *untrue*, and the result of the preliminary trial which I gave the railway proved that it was in better order for running than ever before, and there was no longer any reasonable doubt that the railway could be kept in use, and earn at least its running expenses, with immense advantages to the credit and prospects of the company, for reasons that every impartial stockholder might approve if consulted.

Second. The trial of a dummy engine on one track, if pronounced a success, opens the door for all persons ambitious of taking hand in schemes of city transit to apply for grants from the Legislature on other routes, and this company will have no safeguards against competing lines, close enough to ruin it financially.

In such case the probability will be strong of a route on West street being legalized within six months, in which case the stock of this company would be valueless and the securities also greatly depreciated. You will remember my informing you how much trouble and expense I had to take to prevent the charter of a competing line on Church and Hudson streets (which was before your official connection with this company). How long is it probable that that scheme would remain dormant, if we, as a company, divest ourselves of all exclusiveness, and invite all possible competition? The more I reflect on this step, the more I am convinced that it is suicidal in its tendency and effects on the interests of this company, and will bring down the curses of the holders of its stock or securities on all who aid or abet the "dummy trial," should it be considered a practical success. And for these reasons *I protest against it*.

Third. Under the contract between this company and myself, one-third of all the territory on Manhattan Island belongs to it exclusively in the protection of all patents acquired or to be acquired for the present motive power. If the motive power proves a success, the protection is worth millions of dollars to its stockholders, beyond all question. It has already been bargained and partly paid for; why, then, throw it away?

I have to advise you, officially, that the only obstacle in the way of a complete mechanical success for the cable system, I have (since my last letter to you was dated) found a remedy for, and can apply the same at short notice; I refer to the superseding of the use of the trucks, so that but a bare cable only need be used. Had my intercourse with the company been fair and just on its part, the past season, I would have divulged this most important discovery without a day's delay, but after incidents referred to at the commencement of this letter, no one would expect me to do so, except under new guaranties and conditions; these I am ready to specify whenever desired, and disclaim all desire of imposing new conditions or rules from the company, but simply to have those previously agreed to, on its part,

made practically effective and binding, and its original or preferred stockholders also protected.

To show that there is no sham about the assertion of the mechanical result, I am ready to put up one-half of my ultimate stock in this company as a forfeit, if my claim is not verified, or I will submit the invention to Messrs. Wm. E. Dodge, E. W. Dunham and George S. Coe, or either two of them, if the company will accept their opinion, as to its practical success, and thereupon put me in position to make a practical demonstration of its working operation, within say sixty days.

In conclusion I have to express an opinion that so important a step as placing a dummy engine on the railway, in view of the risk it involves, should receive the prior sanction of the directors or stockholders, or both, after full information and discussion.

Very respectfully yours,

CHAS. T. HARVEY,  
*Patentee."*

„I do certify that the foregoing is a true copy of the document marked Exhibit N.

(Attest.)

L. G. SWEET,  
*Clerk, Committee."*

A. I do consider them thus willful and corrupt; it is easy to prove them willful, by reference to my letters to the directors, in October and November, 1870, wherein I first asked a fair trial of the cable system by avowing my willingness to have experiments with dummy engines tried at the same time, and also state that I am sure that I can perfect the cable-motor if opportunity is given me—of which letter no notice was ever taken by the manipulating majority of the board; also by reference to the report of the directors of March 5th, 1870, and by comparing extracts of the same with extracts from the memorial signed by the same controlling parties or directors of the new organization, and addressed to the Legislature of 1872. (Exhibits "C" and "D.") Thus \$150,000 of experimental outlay up to 1870, which included the motor-power and many other things, is swollen to over \$1,000,000 in 1872 for the cable-expenses alone, without a dollar having been expended by the company on that item in the intervening time. It will be seen that both statements cannot be true, but that the latest one, in report and memorial, is willfully and hypocritically false. That the intent was corrupt, was proven by reference to the policy of the manipulators in endeavoring to procure the enactment of a law, in 1872, which would remove the legal requirement of "due experiment," as then and now existing. It is no secret that



thousands of dollars were expended in attempting to secure legislation to remove the obligations at that time; that Dows, Scott and Cowing came to Albany and paid out large sums of money to professional lobbyists and others, and promised more, to secure such an act, for which the corrupt intent cannot be doubted.

Q. What do you consider the public interests in the premises now require? A. The public interests in the premises now require that the experiments forcibly suppressed should be resumed and completed. The superiority of the cable motor, will then be demonstrated, and the result will be, to enhance the value of property on Greenwich street and Ninth avenue millions of dollars, by removing the nuisances now attached to the present elevated railway system. The steam, smoke and noise, now so noticeable, will then be entirely obviated, and greater safety, speed and comfort attained. Also the rate of fare will be reduced to the amount originally fixed in the law of 1867, which is enough; over forty per cent of the fares now collected on the railway are illegally in excess of that rate; this matter therefore involves issues in which the public are directly interested, as between high and low fares, and the abatement of unnecessary nuisances; the public interests also require that morality and good faith should be maintained and promoted in all legislative acts and permissions; no corporation like that styling itself the "New York Elevated Railway Company," upon the robbery and ruin of the original promoters of the scheme, of which it has usurped possession, by the unjust and illegal methods hereinbefore mentioned, should ever be recognized by the great State of New York; on the contrary, the equitable rights of those who risked their time and means in the inception of a worthy enterprise should be sought out and protected in the exercise of the proper functions of government; an engineer, who furnished the first practical ideas of what is now an unquestionable successful method of rapid transit, should not be left to be cut off by fraud from the opportunity of perfecting his plans by due experiment when proceeding in good faith, and in exact conformity to special enactments of the sovereign power of the State; these rules apply so forcibly and clearly to this case, that I rely with the utmost confidence on the present Legislature to interpose its authority in the premises.

Q. Will "due experiments" yet be made if this Legislature shall especially require them, but without expense to the State?

A. Satisfactory bonds can be furnished to any amount, that after the motive machinery and cars are put back, at the expense of the constructing company, in the condition they were in, in 1870, all the necessary proposed experiments will be completed without expense to the State or the company, and without serious interference with the use of the railway with its present unauthorized motor.

*April 2, 1873.*

STEPHEN O. JENNINGS sworn :

Q. Give name and residence. A. My name is Stephen O. Jennings, my residence Hempstead, New York.

Q. What is or has been your occupation? A. I now reside on and operate a farm, was for many years engaged in the carpet trade in the city with Johnson, Higgins & Company and A. T. Stewart & Co.

Q. When did you become connected in business matters with the Elevated Railway Company and what were your duties? A. I was engaged by C. T. Harvey, early in 1867, to assist him at Albany in business of the railway company generally, and subsequently became interested in its stock and was appointed assistant manager by the directors.

Q. Are you personally acquainted with John T. Tracy and William L. Scott, and if so, what were the business relations between them? A. I do know them both, at one time intimately; they are brothers-in-law I believe and partners in many stock gambling operations on Wall street; they act always in concert, as I learned, and I knew them as pre-eminently unscrupulous as to the means by which they obtain wealth; both are reputed millionaires, and control vast amounts of funds; Mr. Tracy is president of the Rock Island and Chicago and North Western Railways; their profits, on what was known as a secret issue of Rock Island stock, was stated at over \$400,000 each, and it was understood that it was a part of that money which they invested in the Elevated railway.

Q. What positions and influence had they, or do they now exert, in the affairs of the Elevated railway? A. Since October, 1869, they have controlled the affairs of the original company, and now control the affairs of the new company, called the New York Elevated Railway Company; David Dows, another of the directors, is a partner more or less in their stock operations; W. L. Wallace is



a family connection of Scott, and always consults their wishes, never acting contrary thereto; these constituted a majority in the old board, and with their friends, also, have a majority in the new board, so that their control was, and is, perfect and absolute.

Q. When did you discover that Mr. Tracy and associates were becoming hostile to Mr. Harvey and his plans, and what were the indications of the fact? A. My attention was first attracted early in 1870 by their stopping payment of funds through Harvey, as had always been done before; they badgered him at meetings of directors, at which I was sometimes present, and opposed all his measures; they also were publicly stating that Harvey and the railway itself was a failure, and not worth a d—n; that all the money they put in was lost, and that they did not consider it worth giving any further attention to.

Q. How did Harvey act under these circumstances? A. He took them at their word, and asked for liberty to secure its extension, or run the line at his own risk, without expense to them beyond what they had agreed to pay in.

Q. Did they assent to this arrangement, and from what motive, in your opinion? A. They did assent to such propositions, as the company's records will show; but their expectations evidently were, that the attempt would result in the total financial ruin of Harvey, as the chances were ten to one that it would, as they were openly ridiculing his efforts, and in one or more instances secretly influenced capitalists, to whom he had applied, not to let him have any money.

Q. When did you learn of Harvey's intention to change the form of application of the propelling cable, and under what circumstances? A. Harvey told me of it himself in October, 1870, at the company's office; said that he had in his recent experiments discovered how to do away with the "trucks," then in use with the cable, and which caused all the difficulty experienced in operating it; that if he could demonstrate that fact on the railway, he would render it impossible for Tracy and Scott to crush him out, as he saw they intended to do; he then had a cable in readiness, and only waited to get ready a car with suitable attachments; he would not trust his plans, he said, to any one, and I found that the assistant engineer knew nothing about it, and did not believe that such a thing could be done.

Q. Were you personally cognizant of the circumstances of the sheriff's sale; if so, what were they? A. I was; the sale was pro-

cured by Tracy and Wallace, ostensibly to render further payments due from Tracy to the company unnecessary by preventing suits of creditors, but in reality to oust Harvey, who they began to fear would succeed in introducing his improvements, and in rendering the enterprise a success, contrary to their plans; they deceived me by stating that Harvey knew and approved the sale, which I afterwards found to be false; the sheriff remarked that the sale would be a very questionable proceeding; but upon payment of several hundred dollars, expenses and bonus, to the deputy sheriff, from Wallace and Tracy, concluded to proceed with the sale; I was present; it took place early in the morning, for judgments bought and paid for by Tracy for less than \$1,000; and immediately afterward Wallace, in the name of the purchaser, gave a written order to stop the cars and discharge the employes; Harvey, a few moments afterward, entered the office, and I saw that it was a surprise to him, but he took no steps except to call a meeting of the stockholders to consider the matter, and has never been in any official connection with the railway since, except as a director for a short time subsequently.

## EXHIBIT I.

*Sheriff's Sale.*

By virtue of several writs of execution, to me directed and delivered, I will expose to sale, at public vendue, on Tuesday, fifteenth day of November, 1870, at ten o'clock, forenoon, at the south-west corner of Dey and Greenwich streets, all the right, title and interest and franchise, of the West Side Elevated Railroad Company, off, in, and to the lease, stock and fixtures of said road in Greenwich street, and all its appurtenances.

(Signed) JAMES O'BRIEN,  
*Sheriff.*

JOSEPH DEMPSEY, *Deputy Sheriff.*

Dated NEW YORK, *November 8th*, 1870.

I certify that this is a correct copy of the notice marked Exhibit I., including the spelling of the word "*off*."

L. G. SWEET,  
*Clerk Com.*

Q. What did those holding control under color of the sheriff's sale propose to you? A. They, on the day of the sale, requested me to continue with them, stating that they would, thereafter, control the railway; that they had plenty of money to pay up the arrearages of my back salary; and increase it to probably double the former

rate, which was \$2,500 per year; they also promised to keep my stock interest unharmed, and requested me, shortly after, to go to Albany to attend to their interests there.

Q. Did you accede to their wishes, and how? A. I did; I went to Albany and spent the balance of the session of 1871 attending to their interests; when Tweed and the Viaduct railroad promoters did their best to have the charter repealed, as it stood in the way of higher rates of fare on their road; I was offered \$50,000 in New York city bonds, if I would retire or consent to such repeal; I resisted, and, with my friends, prevented the act of repeal in the House after it had passed the Senate, with but one dissenting vote, as the records show; on my return to New York, Tracy and Wallace repudiated their promises to such an extent that I had to borrow money to pay my hotel bills; my back salary, or subsequent salary was never paid; my stock was cut off, and I given to understand that all the promises made me were finally repudiated.

Q. Did you find Harvey's influence hostile to the elevated railway, or otherwise, after his removal? A. I met Harvey before I proceeded to Albany in 1871, who urged my going, as he said he was afraid that the charter might be repealed, and he asked his friends to assist me. Without their aid, especially that of the Hon. Erastus Corning, who had no interest in the railway, except his friendly regard for Harvey, I would have been defeated inevitably, so powerful was the pressure and so liberal the inducements offered to procure the repeal of the charter at that time.

Q. Were you present at the regular annual meeting of the railroad company held in January, 1871, and if so, state what took place there? A. I was; Harvey addressed the meeting in person; Messrs. Tracy, Dows, Wallace and Dunham being a majority of the directors, were there also; Harvey stated that he had discovered how to perfect the cable, so as to make it better than any other possible motor on the elevated railway; that he would surrender one-half his stock to the company, as a forfeit, in case of a failure to prove his assertions. Tracy and associates had deceived him and dishonored their obligations to him previously to such an extent that he would not trust them with his plans or rely on their seeing it properly applied; that the stock trust alone prevented his having the power, as himself and friends then owned a majority of the stock, but, owing to the trust, could not vote on it; he offered to show his plans to a special committee of stockholders, if, on their favorable report, the trust would

be dissolved, or a fair trial be had, independent of Tracy, whom he denounced as unworthy of confidence; the ring took no action on Harvey's proposition, and having the majority of the stock in their control, re-elected themselves a majority of the directors, and then adjourned.

Q. What would have been the result, in your opinion, had Harvey divulged his mechanical plans to those in control at that time? A. They would have stolen the plans, or have prevented their use, unless Harvey had submitted to their dictation.

Q. Could he consistently have done more than he did toward enabling the company or the public to receive the benefit of his plans? A. He could not in justice to himself.

Q. Was there any real necessity for a reorganization of the corporation? A. There was none; the floating debts of the company only amounted to about three per cent of the paid-in capital; over nine-tenths of the bondholders and creditors had, at Harvey's solicitation, signed an agreement to extend principal and interest until December, 1872, so there was no pressure of debts, except a few small ones, and the stockholders would unanimously, I have no doubt, have adopted any reasonable proposition for reduction or rearrangement of their interests, had they been properly asked.

Q. What was the real object of that measure, in your opinion? A. Simply to enable Tracy and associates to rob the pioneer projectors and investors of their rights and interests, without compensation in any adequate degree.

Q. Was there any concealment or want of knowledge, by the stockholders, of the nature or extent of Harvey's contingent compensation? A. None whatever; every stockholder knew that he was, by a unanimous vote of the stockholders and directors, entitled to one-fifth interest in the profits of the company, represented by the common stock whenever issued; Tracy and associates inspected the contract to that effect, as I was informed before they came in, and were to be allowed as much bonus for their loans, over and above legal interest, as had been allowed him for five years of unremitting labor, both as engineer and financier.

Q. What interest did you have in the stock of the company and how obtained? A. I had \$10,000 par value allotted me for extra services, and for signing the bond to the State obligations myself, jointly to the extent of half a million of dollars.

Q. Why did you and other stockholders not attempt to recover

your rights by recourse to the courts of law? A. Because the ring of Tracy and associates was composed of such wealthy railway operators, and had such a retinue of able lawyers in their service, paid by corporations controlled by them, that myself and others felt that an appeal to the courts would be ruinous in cost and delay; many bondholders, for this reason, joined the new organization, as the only way to save something of their investment, with the least trouble and risk.

Q. Were other stockholders beside yourself cognizant of Harvey's desire to try his concluding experiments; if so, whom, so far as you can now recollect? A. I think all of them heard of it; but many were prejudiced against the practicability of the idea, by the representations of J. A. Cowing, who, at the instigation of the ring, employed his time mainly for the last two years or more, in canvassing the stock and bond holders to misrepresent the facts in that regard: I remember Mr. Wm. E. Dodge, as one, from his having written a letter to the chairman of the Railway Committee, in the Senate, which was presented when I was present, and which I subsequently obtained and now present as evidence on this point.

#### EXHIBIT No. II.

PHELPS, DODGE & Co., *Cliff street, between John and Fulton.* }  
 NEW YORK, *April 25, 1872.* }

MY DEAR SIR.—My friend, Mr. Harvey, is the only man who has really done anything for us, in the way of rapid transit, and he has had to contend with all kinds of opposition and trouble, and lost largely, and yet he knows more about it than any man in the city. He has been long satisfied that he could propel the cars without using an engine, and now has propelled it, but the parties who now have the road in charge will not allow the experiment. He is entitled to it, and I hope you can get such an act as will compel them to allow him to test it. Anything you can do to aid him will confer a special favor on your old friend, and am glad to know by Mr. Harvey that you still remember me.

Truly yours,

WM. E. DODGE.

Hon. E. M. MADDEN, *Senator.*

I do hereby certify that the foregoing is a true copy of the letter submitted.

(Attest)

L. G. SWEET,  
*Clerk Com.*

Q. Have any of the officers of the present or reorganized Elevated Railway Company superior qualifications or experience to fit them

for the oversight of quick transit facilities in the city of New York?

A. I think not, but quite the reverse; Scott, the president, is what is known as "a sporting man," and is a resident of Erie, Pa., as the following advertisement, taken from a Western paper, shows to be the case in 1872:

DAILY PLAIN DEALER, Monday Evening, *July 29*, 1872.

The Erie Observer says: "Hon. Wm. L. Scott of Erie offers the following wager on the results of the campaign: \$500 that Buckalew will carry Pennsylvania, \$500 that Hendricks will carry Indiana, and that Greeley will be chosen President. Although his proposition has been open for a week, no Republican has dared to take it up."

Father, may I go out to vote?  
Yes, my son, go freely,  
Put on your old white hat and coat,  
And vote for Horace Greeley.

Wallace, the vice-president, is a confectioner, doing business on Cortlandt street, New York, and without any experience with railways other than this. Mr. Cowing, the secretary and treasurer, is a broker, selected, as I understand, because he was as unscrupulous as the ring which employs him. The superintendent, Mr. Wyman, I am informed, is not an educated or practical engineer, but simply copies, so far, Harvey's plans, with such variations as he can devise, but which do not yet appear to be material or novel.

Q. Did you ever know of any serious cases of frightening of horses while the cars were propelled by the cable motor? A. Never; and I know that no such case could have occurred without my hearing of it.

Q. Have you heard of any since the steam dummies have been in use? A. I have; a friend of mine, Mr. Charlic, president of the Long Island railroad, had his carriage wrecked, while his family narrowly escaped serious injuries, by his horses becoming frightened on Ninth avenue, by the steam and noise of the dummy engines.

Q. Did you ever ride on the cars with the cable motor, and how did it seem to perform? A. I have, scores of times, and found the motion of the cars when under way much more easy and pleasant than with dummies; have ridden hundreds of miles on the railway by cable motive power.

Q. Were you on the cars at the time the track gave way under the trial by test weights; if so, state the circumstances and results?

A. I was, with fifteen other employes, including Mr. Harvey; he

insisted on testing the railway by hauling a heavily loaded car, at full speed, after the same weight and car had gone over the road at a slow speed; the other directors were opposed to it; one span gave way under the latter test, and then Mr. Harvey was permitted to brace the track in the manner he had previously desired, but lacked funds to pay for; the style of brace he then adopted has since been added to the whole line.

Q. To whom is the credit of the mechanical success of the present elevated railway due, and to what extent? A. To the original projector and engineer, Mr. C. T. Harvey; those now in control could never, in my opinion, have carried the enterprise through its early stages of development, and they are not now able to improve on his plans which they simply copy in all essential particulars; the introduction of steam dummies was not opposed by him as not practicable, but simply because not as good, in his opinion, as an improved form of cable motor which he has, as yet, been prevented from trying, as the law evidently requires.

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*April 9th, 1873.*

ROBERT TURNER, SWORN :

By Mr. TRACY :

Q. Mr. Turner, you had some pecuniary transactions in the stock known as the West Side Railway Company's stock; have you brought a statement of those transactions with you? A. The statement was submitted.

Q. On December 8th there was a sale made which amounted to \$7,000, was that a cash sale? A. Yes, sir.

Q. How many shares of the stock of the company were included in that sale? A. Fifty.

Q. That would be at the rate of forty per cent premium, would it not, on the amount of the stock sold, and who were the sellers of the stock? A. Turner & Brothers.

Q. Which part of the statement contains the sale to which you refer? A. That of December 8th, 1868. (Marked Exhibit F.)



EXHIBIT F.

NEW YORK, *April 8th*, 1873.

TURNER BROTHERS, 14 *Nassau street*,  
*With Elevated Railroad Company :*

August 18, '66, stock .....	\$3,000 00
June 5, '67, stock .....	2,000 00
December 12, '68, stock .....	2,136 68
	<hr/>
	\$7,136 68
December 8, '68, sale of stock .....	\$7,000
February 8, '73, sale of stock .....	160
	<hr/>
	7,160 00
	<hr/>
	\$23 32
	<hr/> <hr/>

JAMES A. COWING, sworn.

Q. State what you know about the five per cent of the net earnings being paid to the city of New York? A. The statement that I present shows the net earnings of the road from April, 1871; there was one payment made to the city before that time; one payment was made before the road came under my control.

EXHIBIT E.

*Statement earnings and expenses New York Elevated Railroad Co.*  
1872.

March	31.	Earnings quarter end'g this date,	\$3,478 30	
		Expenses	3,354 61	
			<hr/>	\$123 69
April	20.	Five pr. ct. p'd comptroller,	\$6.18.	
June	30.	Earnings quarter end'g this date,	\$3,551 50	
		Expenses	3,382 40	
			<hr/>	169 10
July	10.	Five pr. ct. p'd comptroller,	\$8.46.	
Sept.	30.	Earnings quarter end'g this date,	\$6,714 80	
		Expenses	6,506 35	
			<hr/>	208 45
October	5.	Five pr. ct. p'd comptroller,	\$10.42.	
Dec.	31.	Earnings quarter end'g this date,	\$10,474 40	
		Expenses	9,922 67	
			<hr/>	551 73
				1873.
January	15.	Five pr. ct. paid comptroller,	\$27.59.	
				1873.
January.		Earnings, 48,948 passengers ....	\$4,894 80	
February.		" 53,085 " ....	5,308 50	
March.		" 68,442 " ....	6,844 20	
			<hr/>	17,047 50
				<hr/> <hr/>



*Statement earnings and expenses West Side Elevated Railway Co.*  
1870.

Dec.	31.	Earnings quarter end'g this date,	\$1,218 40	
		Expenses " "	1,160 04	
	1871.			\$58 36
January	31.	Five pr. ct. paid comptroller,	\$2.91.	
March	31.	Road not operated; no earnings for quarter ending this date.		
June	30.	Earnings quarter end'g this date,	\$1,942 90	
		Expenses " "	1,893 36	
				49 54
July	3.	Five pr. ct. p'd comptroller,	\$2.48.	
Sept.	30.	Earnings quarter end'g this date,	\$3,385 30	
		Expenses " "	3,237 05	
				148 25
October	5.	Five pr. ct. p'd comptroller,	\$7.42.	
Dec.	31.	Earnings quarter end'g this date,	\$2,921 10	
		Expenses " "	2,834 84	
	1872.			86 26
January	6.	Five pr. ct. paid comptroller,	\$4.32.	

By Mr. VEDDER:

Q. You are the secretary and treasurer of this road? A. Yes, sir.

By Mr. TRACY:

Q. Was the \$100,000 bond given according to the act? A. I have in my possession a copy of such a bond handed me by the attorney, which is *now* in my possession.

Q. Is the copy certified to as a copy of the bond on file? A. My recollection is that it is a certified copy.

Q. State now as to the payments made to the city and vouchers therefor? A. Payments have been made according to the statement in Exhibit E., vouchers for which I hold in my hand, copies of which are to be handed to the committee.

(Copy.)

EXHIBIT L.

Received for the corporation of the city of New York, from West Side Elevated Railway Company \$7.42, for five per cent net profits for three months ending 30th September, 1871, as per supplementary laws of New York, section 2, chapter 855, June 3, 1868.

\$7.42.

(Signed)

THOS. DUNLAP,

*Collector City Revenues.*

*per D. J. O'CONOR.*

NEW YORK, Oct. 5, 1871.

COMPTROLLER'S OFFICE, HALL OF RECORDS.—Office hours from 11 to 1 o'clock.

*Vouchers similar to the above.*

Dated Jan. 31, 1871, for year ending Dec. 31, 1870.....	\$2 91
July 3, 1871, for six months ending June 30, 1871 ..	2 48
Oct. 5, 1871, for three months ending Sept. 30, 1871,	7 42
Jan. 6, 1872, for three months ending Dec. 31, 1871,	4 32
April 20, 1872, for three mos. ending March 31, 1872,	6 18
July 10, 1872, for three months ending June 30, 1872,	8 46
Oct. 5, 1872, for three months ending Sept. 30, 1872,	10 42
Jan. 15, 1873, for three months ending Dec. 31, 1872,	27 59

J. A. C.,  
*Treasurer.*

ALBANY, *April 9, 1873.*

Q. Will you now furnish the committee with a copy of the order of the commissioners, allowing the use of the dummy engines? A. I have the original in my hand, of which I will furnish a true copy to the committee.

(Copy.)

EXHIBIT G.

The undersigned commissioners duly appointed as provided by section 5 of an act of the Legislature of the State of New York, entitled "An act to provide for the construction of an experimental line of railway in the counties of New York and Westchester, passed April 22d, 1867, and in pursuance of section first of an act supplementary to said act, passed June 3d, 1868, having duly investigated and examined the subject-matter, do hereby approve of, permit, empower and authorize the constructing company to adopt and use steam as a motive power on said line of railway, in using and driving by such power what is known as the dummy engine with cars attached thereto, on the principle of the engine now in practical or experimental operation upon said line of railway.

(Signed)

JACOB S. FREER,  
F. J. FITHIAN,

*Commissioners.*

Dated NEW YORK, *Feb. 9, 1871.*

Q. From the time of that certificate have the cars been run by dummy engines? A. They have been since I came into the management of them, which was in April, 1871.

Q. How much of the time has the road been run? A. It has been run every business day.

Q. What part of the length of the road has been run over, and how often do the cars run over it? A. The length of the road is three and one-half miles; it was run for three miles the

first year or more ; it is now run the whole three and one-half miles ; I commenced running about eighteen trips a day over the road ; that has been gradually increased to ninety-six trips daily.

Q. How many passengers per day go over the road ? A. At the commencement of my management there were about 200 ; now on an average about 2,750.

Q. Have you a printed copy of the second annual report of the directors of the West Side Elevated Railway Company, to submit to the committee, issued March 5th, 1870 ? A. I have no such copy.

Q. Have you a copy of the printed memorial of the New York Elevated Railway Company to the Legislature, dated February, 1872 ? A. I have a printed document of that date, which I now hand to the committee marked Exhibit H.

#### EXHIBIT H.

##### *The New York Elevated Railroad—Statement and Petition.*

More than \$1,000,000 was raised and expended prior to 1871, in material and construction upon this road, when the plan of operating it by means of wire cable and stationary engines was abandoned.

In January, 1871, a dummy with suitable passenger cars was ordered.

At this time there was a single track constructed from the Battery to Thirtieth street, about three and a half miles, with stations for taking and leaving passengers at Dey and Twenty-ninth streets *only*. In April following, the dummy and two cars for twenty-two passengers each were placed upon the track.

On the 27th of the last named month the road was open for passengers, commencing with eighteen trips daily, between Dey and Twenty-ninth streets, where only there were stations. Time, fifteen minutes ; distance, three miles.

On the 16th of June following, a third car for twenty-two passengers was added. On the 29th of that month the trips were increased to twenty daily.

On the 13th of November following, the trips were again increased to twenty-four daily, and have so continued to this time.

From April 20th, 1871, to January 20th, 1872—just nine months—this train was run every day except Sundays, every trip upon the time-table was made, and, except in three cases, the train was never one minute out of time, nearly every trip being made in fourteen and a half to fifteen minutes.

In these nine months, with this dummy and these two and three cars, 5,034 trips were made, running 15,102 miles, and carrying 70,600 passengers safely and with very great satisfaction to them.

The train is now making its twenty-four trips, seventy-two miles, and carrying on the average 500 passengers daily.

Preparations are now being made to put on three more trains of improved dummies and cars, with a capacity of about 100 passengers each train, and it is purposed to run the four trains from the Battery to Thirtieth street, leaving each terminus every fifteen minutes. It is also purposed to erect stations along the entire line—probably seven or eight way stations. A train would pass each station each way every fifteen minutes. With suitable turn-outs, this can be done upon the present track.

This accomplished, the proprietors will proceed step by step to carry out the purposes of the organization, and endeavor to solve the problem of safe and rapid transit between the upper and lower ends of the island.

The following petition was presented in the Assembly, Saturday, February 3d, by the Hon. Wm. A. Whitbeck, of New York city :

*To the Honorable the Legislature of the State of New York :*

The petition of the New York Elevated Railroad Company respectfully shows :

Your petitioners are a railroad corporation, duly organized under the general railroad laws of this State, and have acquired and now hold all the property and franchises which were of the West Side Elevated Patented Railway Company of New York city, and your petitioners have now in use the elevated railway in Greenwich street and Ninth avenue, which was built by the former company.

The original plan of the former company was to move the cars by means of stationary engines and a revolving wire cable.

That method was pursued for some time, when it was totally abandoned, after more than a million of dollars had been laid out on the experiment.

Afterward, in April, 1871, the company commenced running trains of two cars, carrying twenty-two passengers each, drawn by a light dummy engine; and has continued that mode of operation thence hitherto. On the 20th of April, 1871, the train made eighteen trips daily between Dey and Twenty-ninth streets, at which termini only there were stations, the time of transit each way being fifteen minutes, the distance three miles. This was continued, and in June a third car for twenty-two more passengers was added, and the trips increased to twenty a day. In November, 1871, the trips were increased to twenty four daily, and have so continued to this time.

Thus, from April 20th, 1871, to January 20th, 1872, just nine months, the train has been run every day, Sundays excepted, and has made the trip in fourteen and a half to fifteen minutes, never varying one minute except in three instances. The trains in that time have made 5,034 trips, equal to 15,102 miles, and carried 70,600 passengers in perfect safety and to their great satisfaction.

The road is now making twenty-four trips, equal to seventy-two miles, and carrying an average of 450 passengers every day.

Your petitioners are now arranging to add three more trains, with capacity for one hundred passengers each, to be drawn by greatly

improved light dummies, and thereby run four trains between the Battery and Thirtieth street daily, leaving each terminus every fifteen minutes from six o'clock in the morning till nine or ten o'clock in the evening, and also to add seven or eight way stations, as all its business now is done with no stations intermediate the termini.

Your petitioners are thus proceeding step by step to carry out the purposes of the acts of the Legislature authorizing the Elevated railroad, and to solve the problem of safe, quick, frequent, comfortable and regular transit between the northern and southern parts of the island.

Your petitioners, therefore, pray the favor of your honorable body to this enterprise, and the passage of such legislation as in your wisdom may appear suitable to enable your petitioners effectually to accommodate the public, by extending and increasing their operations.

And your petitioners will ever pray, etc.

NEW YORK, *February*, 1872.

W. L. SCOTT, *President*.

JNO. H. COWING, *Secretary*.

DAVID DOWS, *Treasurer*.

*Directors.*

DAVID DOWS.

W. L. SCOTT.

F. H. TOWES.

GEO. HOWARD MARVIN.

JNO. H. COWING.

H. KENNEDY.

D. N. BARNEY.

A. H. BARNEY.

WM. L. WALLACE.

JOHN D. MAIRS.

A. C. BARNES.

MILTON COURTRIGHT.

JAMES A. COWING.

Among the stockholders as now organized, and who were also proprietors in the former organization, we find: Wm. E. Dodge, Esq., John H. Hall, Esq., A. S. Barnes, Esq., Wm. L. Wallace, J. R. Jesup, Morris K. Jesup, Esq., F. Schuchardt, Esq., Danl. Torrence, Jas. W. Elwell, E. C. Delavan, R. P. Getty, S. H. Thayer, Messrs. Morton, Bliss and Co., S. D. Babcock, Esq., J. B. Johnson, Esq., Alanson Trask, W. S. Gurnee, S. M. Pettengill, Messrs. Babcock Bros., and others.

The following petition has been forwarded to the Assembly, with 1,000 names, and more are being added:

*To the Honorable the Legislature of the State of New York:*

The memorial of the undersigned respectfully shows:

That your memorialists have often been passengers on the cars of the elevated railway on Greenwich street and Ninth avenue, drawn by a light dummy engine. Many of your memorialists have thus passed over that railroad almost every day for several months past.

They have found the trains regular, prompt, rapid and safe, the trip being accomplished in about fifteen minutes, the distance being three miles.

Your memorialists, therefore, pray your honorable body that this great public convenience may be continued, and that the company, which is thus serving the public so satisfactorily, may be allowed to extend its operations according to the wants of the city.

And your petitioners will ever pray, etc.

NEW YORK, *February*, 1872.

REV. H. WARD BEECHER,  
HON. CHARLES O'CONOR,  
C. H. HAMILTON,  
HIRAM BARNEY,  
DANFORTH N. BARNEY,  
C. V. A. SCHUYLER,  
J. B. DUNHAM,  
DOUGHLAS SMYTH,  
WARREN WARD,  
CHARLES M. CONNOLLY,  
LEVI P. MORTON,  
HON. G. HILTON SCRIVENER,  
ISAAC H. KNOX,  
JAMES BOYD,  
FREDERICK L. TOLLET,  
SHEPARD F. KNAPP,  
Gen. JOHN EWEN,  
J. O. CAMERON,  
A. L. SONLUND,  
A. H. BARNEY,  
I. VAN ARDEN,  
THOS. B. PECK,  
JAS. ROBERTSON,  
D. W. C. WARD,  
GEO. HUSSEY,  
JACOB DU BOIS,  
L. L. JOHNSON,  
BENJ. ODELL,  
H. HOPPER,  
A. B. WILCOX,  
THOS. CUTHBERT,  
JOHN RATHBONE, Jr.,  
GEO. G. TRASK,  
FRANCIS LARKIN,  
JAS. WILSON,

WM. P. ORTON, Prest. W. U. T. Co.,  
CHAS. EDWARDS,  
W. L. HANICURD,  
N. RANDALL,  
W. H. LEWIS,  
RUFUS PARKS,  
F. B. BREWSTER,  
JOHN R. SMITH,  
ALBERT S. ROE,  
JAS. CHAMBERLAIN,  
JOHN C. GRAFF,  
W. H. SCOTT, Jr.,  
R. M. VERMILYER,  
E. A. DRAKE,  
S. B. MORRIS LOOK,  
JOSEPH WORCESTER, M. D.,  
WM. HOGE,  
JOHN T. TERRY,  
JAS. H. BENEDICT,  
LEWIS ROBERTS,  
JAMES B. COLGATE,  
T. C. FANNING,  
JAMES E. MALLORY,  
DAVID DOWS,  
CARLOS COBB,  
E. R. LIVERMORE,  
A. E. ORR,  
D. B. COOKS,  
GEO. TALBOT OLYPHANT,  
JOHN B. MAIRS,  
ALFRED M. HOYT,  
W. L. WALLACE,  
JANNEL JONES,  
C. H. MARSHALL, and 960 others.

On the 31st January, 1872, the Assembly of the State of New York passed a resolution directing the commissioners to make a report in reference to the road, from which report the following is an extract :

"That, as the commissioners are advised, those composing the 'New York Elevated Railroad Company,' both as directors and stockholders, are persons of such financial means and influence as will insure the prosecution and completion of any enterprise they may see fit to undertake. And that the structure, property and franchises incident to the elevated railway scheme have thus been freed from all embarrassment and encumbrance consequent upon the loss sustained through the failure of that part of the scheme consisting of the propelling cables and stationary engines; and now, as the commissioners are informed, it is the purpose of the present company to proceed at once to prosecute, to a full and successful completion, the enterprise undertaken by them and to extend their road northward to the Harlem river by a double track, and endeavor, as far as possible, to answer and respond to the imperative demand for quick transit in the city of New York and vicinity. Provided, always, that they can receive such facilities, encouragement and protection from your honorable body as they think, under the circumstances, they are justly entitled to.

"The whole length of single track railway now constructed is about three and one-half miles, of which three miles is in operation. The railway occupies space not needed or used for any other purpose. It is claimed that it in no way obstructs or interferes with the use of buildings along its line, and can be so utilized by means of connecting passages and walks, as to greatly increase the value of such buildings for business purposes. Traffic and travel in the streets is not obstructed by the road, neither is the business of the road obstructed by such travel, as is the case with surface roads. And it is claimed by its former and present engineers that it can be so guarded as to prevent any considerable noise or reverberation.

"Actual experiment in the construction of the present line has demonstrated that in laying the foundations of the supporting columns it is practicable wholly to avoid any interference with, or disturbance of, vaults, sewers, water mains or gas pipes beneath the surface of the street.

"Under these circumstances the commissioners feel justified in expressing their opinion, without disparaging in any manner the just merits of other proposed plans and methods of quick transit, that the elevated railway, as now constructed, with its proposed completion and extension, offers a cheap, speedy and immediately practical means of relief for our crowded population."

Q. Who caused them to be printed? A. They were printed under my direction.

Q. Was such a document actually signed by the parties whose names are appended thereto? A. It was never so signed to my knowledge.

Q. Did you leave copies of this document, as printed, upon the desks of members of the Legislature at Albany? A. I did not.

Q. Have you original or first copies of the letters of C. T. Harvey,



addressed to the present president and directors of the West Side Railway Company, in October and November, 1870? A. I have not.

Q. Are they in your possession among the papers of that company in New York? A. Not to my knowledge.

Q. Have you caused search to be made for them? A. I have looked over the papers that I have belonging to that company and have not found any.

Q. Have you here, ready to produce to this committee agreeable to their order, the records and proceedings of the Elevated Railway Company of the city of New York? A. I have not.

Q. Why not? A. They were not in my possession.

Q. Were you not the proper custodian of them? A. I am not aware that I am.

Q. If you are not, who is? A. I do not know.

Q. Have you here ready for exhibition to this committee, agreeably to its order, a sworn statement of all your receipts and expenditures, as treasurer for any and all bondholders of the West Side Railway Company of the city of New York? A. I have not.

Q. Why is it not produced? A. No such paper exists.

Q. Have you not, as secretary of that company, data to make such statement? A. I think I have.

Q. Have you a schedule of passenger receipts upon the Elevated railway, for each month of the year 1872 and 1873, as mentioned in the subpoena? A. I have not.

Q. Have you not the data, from which such a statement can be made, of any or all of these years? A. I have not present with me.

Q. Was not that data in New York, where and when this subpoena was served upon you? A. The data was there.

Q. Is that the subpoena that was served upon you? A. Yes, sir; it is. (Exhibit I.)

#### EXHIBIT "I."

##### *To Sub-Judiciary Committee of Assembly:*

The points proposed to be proven by the delinquent witnesses summoned from New York city, are:

First. That John F. Tracy and William S. Woodward, who assumed control of the elevated railway in October, 1869, were at that time and since known as unscrupulous stock speculators in transactions of vast amounts, entitling them to be considered as the leading operators of Wall street during past four years.

Second. Two instances will be proven—one known as the Rock



Island railroad secret issue, where 49,000 shares were placed upon the market so secretly that even directors of that corporation were not aware of it at the time, resulting in vast profits to Tracy and Woodward; second, in placing 20,000 shares of new issue of the same stock at the time of Woodward's failure—by which scores of business men were ruined by simply placing confidence in the representations of Woodward and Tracy.

Third. That funds which ought to have been paid into the treasury of the elevated railway, according to agreement with Harvey, were undoubtedly used in these and other stock speculations; and the habits of the parties in control of that enterprise warranted the assumption that their object in causing its embarrassments was to speculate on it the same as they are alleged to have done.

STATE OF NEW YORK:

IN ASSEMBLY,

ALBANY, *February 12th*, 1873. }

JAMES A. COWING:

SIR.—In pursuance of a resolution of the Assembly, adopted Feb. 12th, 1873, of which the following is a copy:

“On motion of Mr. Burns:

“*Resolved*, That the judiciary committee be and are hereby authorized and directed to ascertain and report whether the provisions of chapter 855 of Laws of 1868, entitled “An act supplementary to chapter 489 of Laws of 1867, and to provide for the collection and application of revenue in the county of New York in certain cases,” have been properly and fully complied with, as the public interest involved may require, and if neglected or evaded, whether willfully, corruptly or otherwise; also, in like manner to investigate as to the official acts and present status of the commissioners provided for in said chapter 489 of the Laws of 1867, and whether any vacancies to be filled according to law, with power to send for persons and papers, and to report at any time.

By order of the Assembly.

J. O'DONNELL,  
*Clerk.*”

You are hereby notified to attend before said committee, at 128 State street, in the city of Albany, on Wednesday, the 9th day of April, 1873, at three and one-half o'clock P. M., there to give such information, touching the subject of inquiry, as may be in your possession in regard to the affairs of Greenwich Street Elevated railway.

And you are hereby further directed to bring with you, before said committee, the following named books, documents, etc., etc.:

One printed copy of the Second Annual Report of the Directors of the West Side Elevated Railway Company, issued March 5th, 1870.

One printed copy of memorial of the New York Elevated Railway Company to the Legislature, dated February, 1872.

The original or press copies of letters of C. T. Harvey, addressed

to the president and directors of the West Side Elevated Railway Company, of October and November, 1870.

The original records of the directors' and stockholders' meetings of the West Side Elevated Railway Company.

The original records of the directors' and stockholders' meetings of the New York Elevated Railway Company.

A sworn statement of all J. A. Cowing's receipts and expenditures as trustee for any or all bondholders of the West Side Elevated Patented railway up to first day of April, 1873.

A sworn statement of the receipts and expenditures of the New York Elevated Railroad Company up to April 1st, 1873, classed as follows, as receipts :

From stockholders.

From bondholders.

From passengers.

From incidental.

Also classed, as expenditures :

On railroad construction.

On office expenses and salaries.

On legal or legislative expenses.

On incidental expenses.

With balances on hand shown.

Also a sworn schedule of passenger receipts for each month on the elevated railroad during the years 1870, 1871, 1872, and to April 1st, 1873 ; and such other documents in your custody as may be required in the investigation of the said subject.

By order of the committee.

C. P. VEDDER,  
*Chairman Sub-Committee.*

Q. Is the letter now submitted, which is marked Exhibit A, in testimony of Harvey, in your handwriting, and is your signature appended thereto? A. The letter is my handwriting, and it is my signature.

Q. Have you had any experience previous to your control of the elevated railway in New York city, and if so, what has it been? A. I have ; I was connected with a railway some four or five years, it may be five or six years, running between Eagle Bridge and Rutland ; I think it was about that time.

Q. Have you had any experience in any other? A. I have never had the practical management of any other previous to this.

Q. About what year was this management of railways? A. Between 1853 and 1861.

WILLIAM L. WALLACE, sworn :

By Mr. TRACY :

Q. Are you connected with the West Side Elevated Railway Company, and if so, in what capacity have you been connected? A. I am the president of that company, and have been since February 5, 1870.

Q. When did that company discontinue the use of the endless cable? A. I cannot give the date without referring to the books of the company.

Q. How long was that discontinued before the dummy engine was used on the road? A. I should say six months, referring as before to the books for decision.

Q. Do you know why, and if so state why, the use of the cable was discontinued? A. It was impracticable, untrustworthy, uncertain, expensive and lacked public confidence.

Q. How much power was required to move and operate one of those cables with cars attached, with a load in on each section? A. One engine of fifteen or twenty horse power.

Q. How much power did it take to operate the same cable without cars attached? A. Very little less was required, probably three horse power less.

Q. How many sections were there? A. I think seven, sir.

Q. Do you know whether the dummy engine has succeeded better, and if so, state how the fact is? A. The dummy engine is a complete success, moving passengers with promptness, regularity and satisfaction.

Q. Were you an officer of the Elevated Railway Co., known as the old company, previous to your being president; if so, in what capacity, and for what length of time? I was appointed (by Mr. Harvey's request) treasurer in September, 1869, and remained treasurer until elected president in 1869.

Q. Are you at present an officer in the New York Elevated Railway Co.; if so, in what capacity, and for what length of time have you been so? A. I am vice-president, and have been for a little more than a year, or since that office was created.

Q. Being president of the old company yet, can you inform the committee who has the custody of its papers? A. In the absence of an election of officers I retained the presidency, and by authority contained in the by-laws have appointed Thomas Gerehart secretary, and who has the custody of the papers.

Q. What was the date during which the railway lay idle, for the

first six months mentioned in your previous evidence? A. I should say six months subsequent to the date of the sheriff's sale.

Q. Do you consider the use of your name appended to the document marked Exhibit H, as authorized by you? A. I do.

Q. Were you authorized to sign your name as president by the board of directors, as contained in the document marked Exhibit J?

#### EXHIBIT J.

##### *Extract from Exhibit J.*

“Allowing for the incidental construction expenses of the first quarter of the present year, or to the first of April, and adding them to the cash outlays in previous years, the grand total will be in round numbers \$900,000, of which about two-thirds are properly chargeable to construction account, one-sixth to experimental outlay, and the remaining one-sixth to incidental expenses. For this expenditure there are three and one-half miles of railway, with a partial equipment of cars, to be inventoried as assets, with chartered vested rights to construct a double track line for the entire length of Manhattan Island. Your directors, before submitting this report, have ridden over the railway as thus far complete, at the rate of from twelve to fifteen miles per hour, or from Cortlandt to Thirtieth street, in fifteen minutes, without any disturbance in the street, without noticeable noise, without occupancy by the railway of a single foot of space necessary for other purposes, and propelled by power out of sight or hearing, which must prove far more efficient and economical when fully perfected than ordinary locomotive motors. Is not this a result of which yourselves, your officers and employes may well be proud? It will be well for stockholders to bear in mind that, in the arrangement of propelling machinery as novel as on this line, ample time must be allowed not only for experiment but for adjustment. Attachments are now being added to the propelling machinery, including a telegraph line and code of signals, automatic speed regulators, etc., which may require months to complete and adjust, for use by preliminary trials, hence your directors cannot as yet specify the day for opening the line to public inspection, although it is evidently not far distant. The trial of the improved form of passenger cars soon to be made will also delay decision as to their form and time of completion. But care and investigation at the outset will save time and money eventually in all those details without doubt. The following extract from the previous annual report of the directors is as pertinent now as then: ‘While your directors are satisfied that it will be a mechanical and financial success, they in common with the inventor, do not consider the system as yet perfect, and it will be for the interest of the stockholders to allow a considerable margin of time and money in continuing the introduction of improvements, as they will from time to time be suggested under the tests of more constant use. Your directors are advised of desirable improvements in details of the

cars and motive power, which your engineer is perfecting and will soon cause to be tested on the railway, and to which he proposes to devote more time and attention when relieved from other official duties.'

Respectfully submitted by order of the board.

W. L. WALLACE,  
*President.*

NEW YORK, *March 5th*, 1870."

"I certify that this is a copy of the portion referred to in Exhibit J.

(Attest.)

L. G. SWEET,  
*Clerk Com."*

A. I cannot say ; the records will show.

Q. Have you any doubt that this document was published by the authority of the board ? A. I cannot tell ; the records will show.

Q. Are you a family connection of William L. Scott of Erie ? A. We are cousins.

DANIEL W. WYMAN sworn :

By Mr. TRACY :

Q. What is your present profession, and how long have you been in it ? A. A mechanical engineer ; I have been so at least thirty years.

Q. When were you first connected with the Elevated Railway ? A. In 1871.

Q. In what capacity ? A. Superintendent ; and have been so until the present time.

Q. Was the cable in use when you became superintendent ? A. It was not.

Q. When was the dummy engine put into use ? A. The first dummy that run to do business was in March, 1871 ; about the 18th.

Q. State how the dummy has operated as a motor on that road ? A. Satisfactorily.

Q. Are you acquainted with the use of the endless chain for railway purposes ? A. I am not.

Q. Are they not used in this country on inclined planes, to some extent, now ? A. I believe they are.

Q. Are they not used in this country on level railroads or those nearly level ? A. Not to my knowledge.

Q. In your opinion as an engineer, are the endless chain cables profitable or safe motors for railroads, level or nearly so ? A. I should say not.

By Mr. HARVEY:

Q. When was the cable machinery commenced to be removed on Ninth avenue? A. I believe in April, 1871.

Q. Were you present during its removal? A. I was.

Q. Was Mr. F. S. Tracy present at any time during its removal? A. Not to my knowledge.

Q. Was any of the work of removing done on the Sabbath day, or any of the machinery taken down, to your knowledge? A. Nothing was removed on Sunday, to my knowledge.

Q. When was the cable removed on the experimental section or lower section? A. I cannot give the date exactly, but think it was in February, 1872.

Q. Wherein do you consider the danger in the use of the cable consists? A. From the fact of its breaking and tearing down the truck finger connected to the cars by the cable, and the likelihood of its not letting go, and danger of these small wheels being propelled out of the track.

Q. Your answer to the previous question refers to the use of trucks with the cable, as on the previously existing road; would the same objection apply to the use of the cable where there are no trucks? A. I do not know; it might depend on how it was arranged.

Q. What was the condition of the road, machinery and cable when you became superintendent? A. Bad.

A. In what respect? A. I found unsafe places, cable taken up, and engines not fit for use.

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ALBANY, *April* 10, 1873.

The committee met pursuant to adjournment, when the following testimony was taken; Mr. VEDDER, chairman.

SAMUEL M. PETENGILL, being duly sworn on behalf of the committee, testified as follows:

Q. Your occupation? A. Publisher.

Q. Where is your business office? A. 37 Park row, New York.

Q. Were you a director in the West Side Elevated Railway Company, and for what length of time? A. I was a director from the commencement, up to January, 1872.

Q. From the organization, I suppose? A. Yes, sir.

Q. Were you the chief holder of the fully paid and actual stock of the company? A. I was for four years from the commencement.

Q. Do you still own your original interest? A. Nearly all of it.

Q. Have you ever received any dividends from it? A. Never have.

Q. What was the motive or inducement which led you to invest in the enterprise? A. First, to make a profitable transaction was one reason; second, to promote a rapid transit in New York; third, having confidence in Mr. Harvey's plan, and believed it to be the most feasible means of bringing about that rapid transit.

Q. Any other, were there special inducements offered you? A. The plan, the rules adopted, we had special privileges given us which I thought would be a very good transaction, if carried out in good faith.

Q. Were they embodied in any particular form? A. They were in the by-laws of the company.

Q. Are those the by-laws that you have referred to? (By-laws shown witness.) A. They are.

Q. I make that as an exhibit, marked K. Were you a director at the time Woodward and Tracy acquired control? A. I was.

#### EXHIBIT K.

*“Resolutions of the Board of Directors, passed August 25, 1866, defining the rights and privileges of preferred and common stockholders, to which reference is made in the certificates of stock issued as subject thereto.*

Whereas, the subscribers to the capital required to conduct the experiments resulting in the obtaining of the present valuable rights and franchises of this company, have paid unto its treasury the sum of \$200,000 in cash, as appears by the treasurer's books, and are entitled to the issues of stock certificates therefor, in transferable form, and,

Whereas, it was a part of the original agreement or arrangement with the patentee, that in case of the successful issue of such experiments the subscribers should have a pro rata optional right to at least three-fifths of the authorized capital of this company, which agreement it is proper and equitable for this company to carry into effect in good faith as the successor to the rights of the patents, and to the results of the experiments secured by outlay of the said subscribers' capital.

*Resolved*, That there be created and issued to the subscribers aforesaid, proportionate interest in a preferred capital stock, limited to a total issue of \$200,000, to have distinctive form of certificate, and to be entitled to preferences and rights as follows:

1st. To interest at the rate of seven per cent per annum for each and every year, payable semi-annually on the first day of January



and July in each year, commencing July 1st, 1868, before the payment of any interest or dividends to any other class of stockholders.

2d. In the event of any future increase, as specified, of the capital stock of this company, beyond the sum of \$750,000, including the above-named preferred stock, then and thereupon the holders of such stock shall have the option to subscribe for and have allotted to them any increase of the capital stock, pro rata, up to (including the present capital stock) the sum of \$5,000,000. And in the event of said preferred stockholders neglecting or refusing, for thirty days after notice given them of any proposed increase of capital stock, to exercise said option, and to receive and pay for their pro rata of such increased capital stock in accordance with its terms of the then and thereupon said increased capital stock, so much thereof as shall be taken by said preferred stockholders shall be allotted to the common stockholders pro rata.

Provided nothing herein contained shall be construed as interfering with or preventing the sale and issue of capital stock at par, for cash or its equivalent, without allotment to stockholders, at discretion of the directors, or of the issue of stock for the patent interests under existing agreements, or to respond to the options of convertible bondholders.

3d. The right to demand and receive dividends in stock to represent or capitalize surplus earnings, as specified and reserved in resolution of even date herewith, authorizing the issue of the common capital stock of this company.

4th. The right to convert shares of said preferred stock into common stock, at par at any time, at the option of the holders thereof, under such rules and regulations as may be prescribed by the directors, in reference thereto.

*Resolved*, That the remaining capital stock of this company shall be known as the common stock, and that certificates therefor, of a distinctive form, be prepared for issue in the usual manner, with the agreement on the part of this company that no dividends in stock shall be made to the preferred stockholders, until a surplus of earnings shall exist after paying seven per cent interest, in semi-annual dividends in cash, on the outstanding capital stock, whether common or preferred, from the date of its issue, after deducting all current expenses and sinking fund deposits. But stock dividends may be demanded by and shall be issued to the preferred shareholders whenever the surplus earnings, as above stated, shall equal ten per cent of the then existing capital stock of the company, the interest of the holders of common stock therein being by agreement waived, until the whole capital stock shall have reached the aggregate sum of (\$5,000,000) five millions of dollars, after which all dividends, beyond seven per cent per annum to the then preferred shareholders, shall thereafter accrue solely to the common stock shareholders."

Q. Was there any necessity, in your opinion, for the sale of the property and the reorganization of ownership as inaugurated by Mr. Tracy and associates? A. There wasn't in my opinion.



Q. Would the stockholders in your opinion have assented to any reasonable readjustment of stock or bonded interest? A. They would they were willing to do anything that was fair and reasonable.

Q. What do you consider the object prompting these measures of sale and reorganization? (Objected to.)

The CHAIRMAN—I will let him answer.

A. To get control of the company and stock at a small figure, for little or nothing.

Q. Below their real value? A. Yes, sir.

Q. What did Mr. Harvey, as engineer, claim in reference to the motor power to be introduced on the railway?

Mr. LITTLE—I think Mr. Harvey is better qualified to answer that question than this gentleman.

Mr. VEDDER—Do you appear as counsel?

Mr. LITTLE—Yes, sir.

Mr. VEDDER—Let him answer.

A. He claimed it was the most economical and best method of propelling the cars.

Q. What formed the motor? A. It was stationary engines and endless cable.

Q. Was the engineer, Harvey, understood as hostile to the introduction of dummies as a dernier resort? A. I never understood it so.

Q. That was in case the cable should not prove satisfactory, wasn't it? A. It was.

Q. Did he represent at any time during your connection with the railway that the cable motor had been fairly or fully tested? A. He claimed that it hadn't been.

Q. Who did he charge with acting in bad faith towards himself, the company and the public in this regard? (Objected to.)

The CHAIRMAN—I am inclined to think that question is a little improper, for the reason it is hearsay evidence, his swearing to what he said.

Q. I will withdraw that question. Who did the witness, Petten-gill, consider as acting in bad faith towards the engineer and the company, and the public, in this regard?

Mr. LITTLE—I object. Under what part of this resolution is that question asked?

The CHAIRMAN—The question before this committee is this,

whether the laws of 1867 and 1868 have been complied with by this company as the public interest involved may require, and if not, whether willfully, corruptly or otherwise.

Mr. LITTLE—What has the public got to do with Mr. Harvey?

The CHAIRMAN—Nothing in particular with Mr. Harvey.

Mr. LITTLE—You have got “*you*” and “the *public*” together—let it be *you*, and then afterwards the *public*.

The CHAIRMAN—Go ahead. What is the answer?

Q. It was the parties then in control, was it not? (Objected to as leading.) A. It was the management.

Q. Who were they at that time? A. Mr. Tracy and his associates.

Q. John F. Tracy and his associates? A. Yes, sir.

Q. Did you consider that the engineer had good grounds of complaint in this respect? A. I did.

Q. Was C. T. Harvey's financial record, in connection with the affairs of the company, good? (Objected to.)

The CHAIRMAN—Let him answer.

A. It was; his accounts were passed upon and audited, passed by the directors.

Q. By passed, you mean approved? A. Yes, sir.

Q. At what date was that when the person took control? A. After the present management took control.

Q. Why was he, that is, Harvey, removed from the management of the enterprise? A. It was because he stood in the way of the management, didn't carry out their plans, differed from them.

Q. Was the second annual report of the directors of the West Side Railway Company, as printed and marked “Exhibit J,” a duly authorized official document of the company? A. It was printed and circulated as such.

Q. By authority of the Board? A. It was.

Q. Were you present at the annual meeting of the stockholders of the company in 1872? A. I was.

Q. Was your stock and that of Harvey's used to elect other persons to fill yours and Harvey's positions as directors in that company at that time? A. It was.

Q. By whom was it so used? A. By David Dows.

Q. Did you authorize any such use of your stock to Dows? A. I didn't.

Q. In view of the whole management of the elevated railway

enterprise, what do you consider the present status of its corporate affairs to be? A. Most of the original stockholders have been defrauded out of their just dues.

Q. Do you consider that as a proper matter for legislative interference? A. I do.

Q. Have the "due experiments" as to motor power, required by section 1 of chapter 855 of the Laws of 1868, ever been had or concluded? (Objected to; admitted.) A. They have not.

Q. What does the public interest and private equities in the case now require in this regard? A. That the matter shall be looked into, and the old stockholders receive their rights.

Q. In regard to the experiments? A. They ought to have the opportunity to carry out or to prove the cable, with its improvements.

Q. Test the cable with its improvements? A. The cable with its improvements, as it should be tested more than it has been.

Q. Do you think the Legislature should compel it? A. I think they should.

*Cross-examination :*

*Examined by Mr. COWING :*

Q. I understand you to say that the most of the stockholders have been defrauded? A. The stockholders put in their money and received no equivalent.

Q. Name some stockholders that have been defrauded, and how much stock they held? A. Myself, for one, never received a dollar, and put in a good deal of money in the concern.

Q. How much stock have you? A. I have eighty shares in preferred stock.

Q. How many thousand dollars is that? A. \$100 a share.

Q. That would be \$8,000? A. Yes, sir.

Q. Who else was defrauded? A. I believe every one who received nothing for his money.

Q. Name any one, if you please? A. I say all who haven't received any compensation for their money and services.

Q. That is not an answer to my question?

The CHAIRMAN—If you know of your own knowledge any other one?

A. Mr. Harvey.

Q. How much stock had Mr. Harvey? A. I don't know.

Q. Had he any of the preferred stock? A. That I am not positive about.

Q. Do you know of any individual besides yourself that had \$8,000 that was defrauded out of their stock; any other individual besides Mr. Harvey? A. I know of parties.

Q. Will you name one of them? A. My brother has thirty shares.

Q. That makes \$11,000; will you name any other one, Mr. Petten-gill? A. I say all who have not received any compensation for their money have been defrauded out of their stock.

Q. I understand you to say so; I want to know who those parties are? A. I cannot name them.

Q. Do you know any others than those you have named, that was defrauded out of their stock? A. They may hold their stock, but the stock has been made worthless.

Q. Name them? A. I cannot do it without a memorandum before me.

Q. You cannot name any others? A. I don't choose to.

Mr. HARVEY.—Mr. Chairman—the witness is here without any documents with reference to answering the question.

Q. How much stock was there of the old company; what was the amount of it? A. Two hundred thousand dollars.

Q. Was that all? A. There was \$200,000 of the preferred stock I am speaking.

Q. Was there any more than \$200,000? A. There was more of the common stock.

Q. How much? A. I don't know.

Q. In your knowing that the most of the stockholders was defrauded out of their stock, do you refer to the \$200,000 preferred, or to the common stock and preferred, both?

Mr. LITTLE.—I object to the witness sitting by Mr. Harvey; he is talking to him.

The CHAIRMAN.—It is improper when a witness is testifying, Mr. Harvey; you must not suggest any thing to him.

A. I did not use the words "large majority;" I would say, many of them, and the many interested most.

Q. Whether you refer to the preferred stock, or to the preferred and common stock, in your original answer, in the direct examination? A. I refer to both.

Q. I would now ask in what way they were defrauded? A. By making their stock worthless.

Q. How? A. By delays and various expenses, and in various ways they made by a system of—

Q. By delays, expenses, and various ways is the answer? A. Yes, sir.

Q. By delays in what respect; delays in what, and by whom. A. By allowing the notes to be protested, and in various ways.

Q. When were these notes protested? A. I could not give you the date.

Q. About what time? A. They allowed the various notes to remain unpaid.

Q. About what time were these notes protested? A. I couldn't give you no dates; I haven't the documents here to prove it.

Q. Whether it was before or after this election that you speak of where you and Harvey was left out of the board, was it before or after that, that these notes were protested? A. My impression is that it was after as well as before.

Q. That election you state, was it the annual election of 1872? A. Yes, sir.

Q. That was in January, 1872? A. January, 1872.

Q. I would ask if you know of any note that was protested after this election in 1872? A. I have no data with me.

Q. If you know of any note that was protested after that date? A. The coupons on their bonds wasn't paid, I know.

Q. Will you state that there was any note of the old company protested after January, 1872? A. I have no date.

Q. Do you state positively that there was one such note protested after that date?

Mr. HARVEY—He has just stated he didn't know.

The CHAIRMAN—I understand him to say he don't remember whether there was or not; he does not state positively. A. I will not state positively either way.

Q. What leads you to have such an impression as that, who was the financial manager of the old company, and up to what date? A. I cannot tell you.

Q. Who was the financial manager in the early part of the company? A. I believe Mr. Harvey.

Q. How long did he continue so? A. I don't remember.

Q. Did he continue so until the road stopped running with the endless cable? A. I don't remember.

Q. Was he there the whole time you was director? A. I believe not.

Q. Who was in part of the time besides Mr. Harvey? A. I think Mr. Tracy was, part of the time.

Q. Was he financial manager of the company any time while you was director? A. I would not say positively.

Q. You will not say that he was; do you not know that he was never a financial agent of the company? A. No, sir; I don't.

Mr. HARVEY—He first says manager and then agent; there is a very great difference between manager and agent.

The CHAIRMAN—The witness knows the question last asked.

Q. Whether these questions that were asked you on your direct examination, have ever been asked you before to-day here, or put to you or read over to you? A. All of them have not, some of them have.

Q. I would ask you what other ways than you have stated here, the stockholders were defrauded out of their stock? A. Well, the general neglect of the railroad and leaving it to take care of itself.

Q. Was there money belonging to the company to pay these notes that were protested, that belonged to the old company? A. I think not.

Q. They were protested because there was no money? A. I presume so.

Q. By whom was that neglect occasioned? A. I don't charge anybody, any person.

Q. The neglect spoken of by you occurred during the time you was in the board? A. Yes, sir; it seemed to be the settled policy to get charge of the railroad by paying little or nothing for it.

Q. You speak of notes being protested; what notes do you refer to? A. I told you I have no date; notes given for iron were protested, and notes given for various things.

Q. How were these notes secured? A. I couldn't tell you.

Q. Do you know the fact that there was a large amount, two or three hundred thousand dollars of notes, given for money for which the first mortgage bonds were pledged as collateral while you was director? A. I don't know the fact, if it is one.

Q. I would ask whether there was or was not such notes? A. I cannot answer.

Q. Whether the company, while you were a director, gave one or more mortgages on the road? A. I believe so.

Q. Do you know whether those mortgages were ever foreclosed?  
A. I think they were.

Q. Can you from recollection tell about the time that the sale took place? A. No, sir.

Q. Can you tell whether it was before or after the election, 1872?  
A. I cannot; I was not present, and was not notified of it.

Q. Not notified of what? A. Of the sale.

Q. Do you know at what price the property sold under those mortgages? A. I don't.

Q. Do you know the amount of the mortgages? A. I don't.

Q. Do you know whether the property sold for enough to pay those mortgages at the foreclosure sale? A. Not of my own knowledge.

Q. Do you know whether there was a report, called the second annual report, about stockholders, that was drawn and printed by Mr. Harvey, and was repressed by the board; they didn't circulate it? A. I don't remember any such document.

Q. You don't remember of any being suppressed by the board?  
A. I don't now.

Q. Do you remember that there was such a document printed?  
A. As the second annual report?

Q. Yes, sir? A. I remember that there was; yes, sir.

Q. Marked "Exhibit J;" the report referred to; do you know who prepared this report? A. I don't; no, sir.

Q. You was a member of the board at the time this report was issued by the board? A. I was.

Q. Do you remember; was there any motion set forth in this report as discussed over by the board? A. I don't remember anything of the sort.

Q. Do you know that Mr. Harvey prepared this report himself?  
A. I don't.

Q. Do you remember the fact, that after the report was drawn up that it was suppressed by the directors? A. I have no recollection of any report being suppressed.

Q. Such was the fact?

Mr. HARVEY—If you make that remark it is a falsehood.

Q. In your direct testimony you said the law had not been complied with in regard to due experiments; what experiments do you refer to, and what law? A. I cannot give you the page and date of it.

Q. What law; what is the substance of the law? A. I have

read it, but I cannot give you the date of it; it is the law relating to experiments on the West Side Elevated railway.

Q. What did that law require? A. It has been some years since I looked at it; I cannot state it from memory; the exact reading of the law.

Q. Can you state in what respect the law is not complied with?

A. Give me the law and I can tell you.

Mr. LITTLE—I believe this is the law, 1868.

Q. With the law before you, I ask you what due experiments the law requires that were not made? A. What I particularly refer to was, that Mr. Harvey had made some improvements as he claimed upon the motor, and he was not allowed to show these experiments or put them in practice on the road.

Q. Will you read the clause of the law relating to experiments?

(The witness read from the Laws of New York of 1868, chapter 855, page 2034, beginning with the third line from the top of the page.)

Q. No doubt it was lawful to do it, but do you consider that it was required to do it; it made it legal for them to do it, but does it require them to do it? A. I think one part of the law does; this is not the supplement of the law.

Q. That is the last law; I believe that is the only one referred to in the resolution before the committee?

Mr. HARVEY—This being a supplement law, you have to take both together.

JAMES A. COWING recalled for redirect examination:

Mr. COWING—I submit a statement that you required of me yesterday; a copy of the vouchers for the payment of five per cent to the city of New York.

The CHAIRMAN—You have already this in evidence.

Mr. COWING—It was in my testimony yesterday (marked Exhibit L); it is a copy of the original vouchers that was presented to the committee yesterday.

*Examined by Mr. HARVEY:*

Q. Whether in your evidence before the committee you stated upon oath that you didn't leave any of these documents upon the desks of the members of the Legislature at Albany? A. I would like to have that question and answer as the clerk took it.

The CLERK—The evidence isn't here.



Q. Did Mr. Cowing himself or through other persons circulate these documents among members of the Legislature at Albany during the session of 1872? (Objected to. Admitted.) A. A copy was, by my direction, sent, and, I believe, through the post-office of the two Houses, to each member of the House and Senate both; I don't know that they were sent; I give direction to have it so done; I suppose it was.

Q. Had the New York Elevated Railway Company a bill then pending before the Legislature? A. They had one that session; I am not certain whether this was circulated before or after the introduction of the bill.

Q. You considered that the object of the documents, as circulated by you, was to influence the members? A. My object was to give each member the facts as near as I could in relation to our enterprise.

By Mr. HARVEY:

Q. But you say that the actual circulation of these documents was known to several parties who were ready to testify here? A. The witness' recollection of the question was, was there placed on the desks of the members a copy? and my recollection was that I didn't see it done.

Q. Whether that is the handwriting of the former secretary of the West Side Elevated Railway Company? (Paper shown witness.) A. That is the handwriting of Henry W. Taylor.

Mr. HARVEY—I want them in the case.

Mr. LITTLE—This paper may be in the handwriting of Taylor, but it seems that the whole thing is in the handwriting of Taylor; this second paper, I don't know what this is.

Mr. HARVEY—It is a copy furnished by the secretary of that company, addressed to me by the president and directors. The evidence to which that relates has been already introduced.

The CHAIRMAN—Papers shown witness marked M. and N., being in the handwriting of the former secretary of the company.

JACOB S. FREER, being duly sworn on behalf of the committee, testified as follows:

*Examined by Mr. HARVEY:*

Q. Doctor, I would like to know your business office? A. No. 187 West street, New York city.

Q. What official position do you hold upon the elevated railway?

A. One of the commissioners appointed under the original act of 1867.

Q. At the time when you and the other commissioners first inspected that railway was the form, propelling cable, did it have trucks with the cable? A. Yes, sir.

Q. Was this the only form in which the propelling cable was ever used in propelling cars on that railway? A. It was, so far as it came to the knowledge of the commissioners.

Q. Were the trucks an objectionable feature to the cable motor as then in use? A. Yes, sir; they were.

Q. They were decidedly so, were they not? A. Yes, sir; they were decidedly objectionable, the trucks were liable to break and made more noise than necessary.

Q. And they also required much more power? A. Yes, sir.

Q. Did you ever have any official information that experiments were proposed to perfect the use of the cable without the trucks? A. I don't think we did; I don't recollect of any.

Q. Did you have any such information unofficially; if so, when, and by whom? A. I think in the fall of 1870, a certain time when the change was made, I had a conversation with Mr. Wallace on that subject; he said he was having some trouble with Mr. Harvey at the time, and he said that Mr. Harvey was very anxious to have the lower half mile, that they were not using then, to use his cable to try some experiments with.

Q. Did you understand that to be without trucks? A. I don't recollect what I understood at the time; I think he said Harvey claimed to have made great improvements on his cable.

Q. Did Wallace express any opinion about it himself? A. I think Mr. Wallace and I, at the time, thought alike: if we could settle the trouble with Harvey by letting him experiment on the lower half mile, it better be done.

Q. You and Wallace both seemed to entertain the same idea, if that would be satisfactory to Harvey? A. I think I said, if that would satisfy Harvey, that might dispose of the trouble, inasmuch as they were not using that half mile.

Q. What was Mr. Wallace's position in the company at that time? A. I think he was president, at the time, of the old company, and I don't know that the new company was organized; I think he was president of the company at the time; he was either president or treasurer.

Q. It was the time when he was president and treasurer, both?

A. Yes, sir.

Q. In forming a correct opinion of the superiority or otherwise, of a propelling cable as the motor for elevated railways in the public streets, would you consider the trial of such cable without the trucks as an essential element of experimental knowledge to be gained before it was possible to arrive at a just and final conclusion in that regard? (Objected to.)

The CHAIRMAN—We will take his opinion.

Mr. LITTLE—He says his opinion is not worth much about it.

A. I did not say that; I don't know that I correctly get the force of the question.

The CHAIRMAN—The question is whether it would be a good test to try this propelling cable without trucks? A. Before a man could condemn the cable, probably it would have to be tried in every mode which engineers or inventive genius could suggest before it could be condemned *in toto*.

Q. Is that your answer? A. Yes, sir.

Q. On the whole you would consider that, as a commissioner, that the trial of the propelling cable without trucks ought to be had, should you not? A. I don't see how that is pertinent to the case.

Q. Well, ought to have been had at that time. (Objected to.)

A. The commissioners wasn't required or expected to make suggestions of what they should use.

The CHAIRMAN—Mr. Harvey, are you examining to find out whether the official acts of these commissioners were right or wrong?

Mr. HARVEY—I am endeavoring to find out, whether they had due experiments with reference to the propelling cable brought before them, before they arrived at any conclusion in regard to that cable.

Q. Did you consider that the commissioners had any legal power to force the constructing company against its will to inaugurate any new experiment, even if necessary or desirable, to enable the commissioners to arrive at a correct conclusion? A. No, don't think we were authorized by the law to force any experiment on the constructing company as to the motive power to be used.

Q. What would now be necessary, in your opinion, to secure due experiments as to a cable motor upon the Greenwich Street Elevated railway, if the same hadn't been made up to this time? (Objected to. Admitted.) A. Money, competent engineers, and probably a

little more legislation; this answer is based upon the supposition that due experiments had not been made.

By Mr. FITHIAN:

Q. What do you mean by money; money to the commissioners?

A. Money to make the experiments.

*Cross-examination:*

*Examined by Mr. COWING:*

Q. About how much money was expended in the experiment with reference to the cable and its machinery, as near as you can judge? (Objected to.) A. I have no means of knowing definitely.

Mr. COWING—I ask him to approximate.

The CHAIRMAN—If he knowingly can approximate.

Mr. HARVEY—The question would not come under Mr. Freer's knowledge, because I expended the money.

A. My answer is I don't know.

Q. I would ask your opinion how much? A. I could say what I have heard that the operating of machinery and road cost.

By Mr. LITTLE:

Q. Who did you hear it from? A. From various sources.

By the CHAIRMAN:

Q. From any of these officers that ought to know? A. Yes, sir; that in that whole structure there has been over a million of dollars expended.

Q. Would you give an approximate opinion with reference to the cable and machinery, all; how much was expended; I would ask you to give an opinion what proportion of the cost of that road relates to the cable and its machinery? A. About one-quarter of the cost of the road on cable and experiments.

Q. From all the information you have and knowledge on the subject, what is your opinion as regards the best motor power, or the best between the stationery power and cable and the power now on the road—your opinion from your present stand-point? A. What I have seen of the cable and dummy engine, now on the road, I am decidedly in favor of the dummy engine for motive power in the city of New York.

By Mr. COWING:

Q. I wish to offer this in evidence (marked Exhibit O), shown the witness; it is a report of the three commissioners in answer to a

resolution of the Assembly of 1872? A. I suppose it to be a correct copy.

### EXHIBIT O.

*“To the Honorable the House of Assembly of the State of New York*

In response to the resolution of your honorable body of the date of January 31, 1872, whereby ‘the commissioners appointed under the act authorizing the West Side and Yonkers Patent Railway Company to construct an elevated railway in Greenwich street and Ninth avenue, in the city of New York, are hereby directed to make a report to this House within the next thirty days of the operations of said company, the number of miles of road constructed, probable cost of the same, and if the said company still own and possess said franchise, and, if not, to who or whom transferred; if to a company, what company, and who compose said company, and such particulars in regard to the operation and practicability of said road to meet the demand of rapid transmit, and such other matters in connection with the same as to them may seem just and proper,’ the undersigned commissioners named in such resolution herewith submit the following report :

By an act of the Legislature of this State, passed April 22, 1867, entitled ‘An act to provide for the construction of an experimental line of railway in the counties of New York and Westchester’ (chapter 489, Laws of 1867), the ‘West Side and Yonkers Patent Railway Company,’ a corporation previously organized under the provisions of what are known as the ‘General railroad’ laws of this State, were empowered to construct an experimental section of an elevated railway, of half a mile in length, in Greenwich street, in this city, running from Battery place north. The plan and mode of construction was prescribed in the act. The cars on such railway to be propelled by means of revolving cables, driven by stationary engines underground. The act further provides, that when such experimental section should be completed, and in readiness for operation, with a car placed thereon loaded with three times the weight of an ordinary passenger car, the commissioners named in and provided for by the act should proceed to ‘inspect such railroad,’ its structure and operating machinery; and if, upon such inspection and examination, the commissioners should approve of the structure, plan and operation of such elevated railway, and should find that the same could be operated with safety and dispatch, then the commissioners should certify to such facts, and cause a copy of their certificate of approval to be signed in duplicate, and one copy sent to the Governor of the State, who, upon approving the same, should cause it to be filed in the office of the Secretary of State, etc. But in case such commissioners should not approve of said railway, and its plan of construction and operation, they should in like manner make a certificate of the facts, with an order for the removal of the said railway, which should be sent to the Governor, and, if approved by him, filed with the Secretary of State, and a copy sent to the

mayor of New York, and thereupon the constructing company should immediately remove the structure from the streets. In case of the approval of such experimental section of railway by the commissioners, as above stated, and the ratification of such approval by the Governor of the State, then such constructing company were authorized to proceed and erect and construct a similar elevated railway in the counties of New York and Westchester, in the manner and upon the route specified in the second section of the act."

After the passage of the act above mentioned, the constructing company proceeded to erect, on the easterly side of Greenwich street, the experimental section of railway provided for in the act, and had the same completed and ready for inspection about the month of July, 1868, at an expense of about the sum of \$200,000, a part of which was advanced by persons who had subscribed for stock in such company, and a part raised by loans. In accordance with the provisions of the statute, the commissioners proceeded to inspect such experimental section, and to cause the same to be operated, and after as full an examination as they were able to give, they decided to and did sign and deliver to such constructing company their certificate of approval of such experimental section, and caused the same to be transmitted to the Governor of the State, in the manner provided for in the act. That while the commissioners were satisfied that the elevated railway structure itself, so far as related to its plan and scheme, could be made successful for the safe and speedy transportation of passengers and light freight, they had serious doubts whether the proposed motive power by means of a revolving cable, driven by stationary engines, would ever succeed. The reasons which induced the commissioners to approve of such experimental section will more fully appear in the following communication addressed to the Governor of the State, and accompanying their certificate of approval:

(Letter.)

NEW YORK, *July 2*, 1868.

Governor FENTON:

SIR.—Yesterday we signed and delivered to the West Side and Yonkers Railway Company a certificate of approval of the experimental section of their elevated railroad, which, we suppose, will be presented to you for approval. We think it appropriate that we should communicate briefly to you some of the considerations which induced us to make the certificate. It is in our opinion by no means certain that the plan and scheme of an elevated railway on single columns, with cars to be propelled thereon by revolving cables and stationary engines will prove a success. But in view of the fact,

that most of the inventions and improvements of modern times have had their day of doubt and uncertainty—a period when they were wholly experimental in their character—and that to condemn a project because it was not demonstrated to be a practical success, would stop all progress and improvement; we do not feel at liberty, therefore, so far as the *plan and scheme* of this railroad are concerned, by withholding our certificate, to prevent in advance the possible chances of success which may attend the enterprise. Having resolved, therefore, to give our approval to the plan and scheme of this road, all the rest seemed to us matter of mere engineering and mechanical detail. The structure, as it now stands, is very imperfect, particularly in its operating machinery; but all those imperfections are mechanical in their nature, such as defective workmanship and insufficient and inadequate materials and machinery, which may possibly be remedied by engineering skill; and we have the assurance that all defects of that nature will be speedily repaired when discovered, not only from the high character of the gentlemen connected with this enterprise, but also from the necessity of the case. We are of opinion, therefore, that by reason of such temporary defects we ought not to withhold our certificate, and thereby prevent all possibility of practically testing the scheme. For these reasons, and realizing also the fact that the demand and necessity for increased and improved facilities for transit over this island are pressing, we have concluded that it was right and our duty to give to the enterprise a chance to vindicate, if it can, the claims of its projectors. It is proper to add, also, that for the three weeks we have had the road in charge, publicly examining and experimenting with it, no remonstrance or objection to the road on the part of any citizen has come to our knowledge. So far as we are able to learn, public opinion is favorable to the project, and desirous that the road shall be constructed and have a full and fair trial on its merits by practical use,

Very respectfully,

Your obedient servants,

[Signed by the Commissioners.]

On the approval by the Governor of the commissioners' certificate, the company proceeded to construct a single track railway northerly through Greenwich street and Ninth avenue to Thirtieth street, a distance of about three miles, and completed the same in the spring of 1870; and, as appears by the engineer's report, submitted to the company in March, 1870, the cost of construction to Thirtieth street, including the experimental section, was not far from seven hundred thousand (\$700,000) dollars. The precise amount properly chargeable to the construction account, the commissioners are unable to state with greater accuracy. The moneys for such purpose had been raised with considerable difficulty and sacrifice by short loans, with the pledge of stock and bonds of the company as collateral, the company



finding it difficult, by reason of the experimental nature of the enterprise, to raise money at long times by the sale of their bonds or stocks.

On the completion of the road to Thirtieth street, several cars were placed thereon, and experiments were made to test the practicability of the road, as thus far constructed, with the motive power provided. A very brief time sufficed to settle the question that the motive power adopted, namely, the propelling cable by means of stationary engines, was a failure in every respect. Indeed, the manager of the road and the originator of this method of propulsion conceded, in his report to the company of the date of March, 1870, that in the advocacy of the "use of stationary engines and propelling cables as a motive power for railways, he had, up to that time, stood almost alone among professional engineers in his views of that question;" and he incorporated into his report a quotation from another paper, stating that "if it (the propelling cable) succeeds, it would be by the determined perseverance and energy of its undaunted projector in the face of serious obstacles, and almost unanimous adverse opinions of the engineering profession." Unfortunately, however, the confident expectations of the deserving and energetic engineer and manager of the road—the projector of this mode of propulsion—failed to be realized. A very brief test of the propelling cable sufficed to show its inefficiency for practical use, and that the heavy expense incident to its construction and operation was a total loss to the company. Discouraged by these adverse circumstances, men who had up to that time contributed largely of their means of forwarding this enterprise, withdrew any further aid and support, and public confidence in its success wholly failed. The inventor, however, was still sanguine in his hopes of eventually succeeding, and most of the year 1870 was occupied in endeavors to restore public confidence in the enterprise, and attempts at modification and improvement of what were claimed to be defects capable of removal in the machinery of the propelling cable, and in efforts to procure funds for the further prosecution of the work.

Meantime, the financial affairs of the company were in a very embarrassed state. Large sums of money which had been borrowed on short time for the construction of the road thus far, under the hope and expectation that the placing of it in full and successful operation between Thirtieth street and the Battery would enable its promoters to realize ample funds from its bonds and stock to provide



for the refunding of such loans, were pressing for payment, and it became apparent that unless some other motive power could be successfully adopted and applied, the enterprise must be wholly abandoned and the structure removed. Under these circumstances, arrangements were made for placing the property and franchises of the railway company temporarily in the hands of trustees, for the benefit and protection of its creditors and bondholders; and the commissioners were applied to for permission to the company and its then managers to avail themselves of the provisions of the supplementary act of the Legislature of this State in reference to said railway, passed June 30, 1868 (Laws of 1868, chap. 855), authorizing the commissioners to make experiments with some other motive power on such railway, and to adopt and authorize such motive power as, after such experiments, they should recommend or approve. Such permission was given, and arrangements were at once made for procuring and using upon the railway a movable steam engine commonly called a "dummy." *This was at once demonstrated to be successful as a motive power;* and although intended at first as a mere experiment, so complete was the success attendant upon it, that there was very soon manifested on the part of the traveling public, a desire that the company should run one or more cars upon the railway, propelled by such steam engine, in the carrying of passengers. The company acquiesced in this desire, and commenced transporting passengers over the road about the month of April, 1871, by running trains of two passenger cars, and has continued thus, up to the present time, to run trains propelled by such steam engine in the manner and to the extent fully set forth in the memorial and petition of the railway company now occupying and owning the road, and which will accompany this report, showing that, during the past year, with one single engine and with two or three ordinary street cars upon a track as yet somewhat crude and imperfect, and in no respect completed as it can and will be, the company have carried some 80,000 passengers with safety and dispatch, without any detention or accident, and that the company is now making each day twenty-four trips with such train, and carrying a daily average of between four and five hundred passengers.

During all the year 1871, the creditors and bondholders of the constructing company were engaged in providing ways and means to relieve the railway of its financial embarrassment, to provide for its bonds and other obligations, and place the enterprise upon a

sound financial basis ; and for that purpose it was deemed advisable that a new company should be organized under the provisions of the general railroad act, and that, by the consent and approval of parties interested, the property and franchises of the said " West Side Elevated Company " should be transferred to and vested in such new company ; and accordingly a corporation has been duly organized by the name and style of the " New York Elevated Railroad Company," in accordance with the provisions of the general railroad act, the directors and corporators of which were and are mostly directors and corporators and creditors of the aforesaid West Side Elevated Railway Company. And the requisite proceedings have been taken by transfer, advertisement and sale, and proper legal proceedings, to transfer to, and vest in, the said " New York Elevated Railroad Company " all the property, franchises and privileges which were of the said " West Side Elevated Railway Company," which proceedings were not fully consummated and completed until the month of Jannary of the present year.

That, as the commissioners are advised, those composing the New York Elevated Railroad Company, both as directors and stockholders, are persons of such financial means and influence as will insure the prosecution and completion of any enterprise they may see fit to undertake. And that the structure, property, and franchises incident to the elevated railway scheme have thus been freed from all embarrassment and encumbrance consequent upon the loss sustained through the failure of that part of the scheme consisting of the propelling cables and stationary engines ; and now, as the commissioners are informed, it is the purpose of the present company to proceed at once to prosecute to a full and successful completion the enterprise undertaken by them, and to extend their road northward to the Harlem river by a double track, and endeavor, as far as possible, to answer and respond to the imperative demand for quick transit in the city of New York and vicinity. Provided always that they can receive such facilities, encouragement and protection from your honorable body as they think under the circumstances they are justly entitled to.

The whole length of single track railway now constructed is about three and one-half miles, of which three miles is in operation. The cost of construction has been, as before stated, about \$700,000, of which at least one-third is properly chargeable to the stationary engines, the vaults for the same, and the revolving wire cables

attached ; the whole of which last mentioned expense has proved a total loss to the company, except only its value as old material. The total amount of money raised and expended by the constructing company, for all and every purpose incident to the business, is about one million of dollars up to this date.

Practical use and experience has shown that many valuable improvements are capable of being made in the mode and manner of constructing the railway, without departing from the general plan, all tending to lessen the cost, and adding much to the safety and security of the structure, and greatly facilitating speedy and safe travel over the same. From all which, together with the opinions and estimates of competent engineers and practical mechanics, the commissioners are of opinion that a double track elevated railway in and along any of the streets in this city, similar in general plan to that now erected, and over and upon which trains of cars, propelled by steam engines, for the carrying of passengers and freight as speedily and safely as on any surface railway, can be constructed at a cost of not exceeding \$400,000 per mile (double track), including rolling stock, material and equipments, and in a comparative brief period of time. The railway occupies space not needed or used for any other purpose. It is claimed that it in no way obstructs or interferes with the use of buildings along its line, and can be so utilized, by means of connecting passages and walks, as to greatly increase the value of such buildings for business purposes. Traffic and travel in the streets is not obstructed by the road, neither is the business of the road obstructed by such travel, as is the case with surface roads. And it is claimed by its former and present engineers, that it can be so guarded as to prevent any considerable noise or reverberation.

Actual experiment in the construction of the present line has demonstrated that in laying the foundations of the supporting columns it is practicable wholly to avoid any interference with or disturbance of vaults, sewers, water mains, or gas-pipes, beneath the surface of the street.

Under these circumstances, the commissioners feel justified in expressing their opinion, without disparaging in any manner the just merits of other proposed plans and methods of quick transit, that the elevated railway, as now constructed, with its proposed completion and extension, offers a cheap, speedy and immediately practical means of relief for our crowded population.

The demand for rapid transit in this city is no longer a matter of

mere comfort and convenience, but has become a question of paramount importance. The present means of communication have become wholly inadequate for even the local, much less the through travel, and unless some speedy means of relief can be attained, the business interests of the State and city cannot fail to be seriously affected. There are but three railways on which cars are propelled by steam, landing and receiving passengers on New York island (virtually but two), and they are managed with but little, if any, regard to convenience of the local travel; while in Jersey City alone there are five such railroads, and two more being constructed or projected, and all managed with especial regard to the interests of local travel, and by means of which millions of capital and thousands of population are being diverted from the city and State of New York, which would otherwise remain within its boundaries.

All of which is respectfully submitted.

NEW YORK, Feb. 28, 1872.

JACOB S. FREER,  
FREEMAN J. FITHIAN,  
JOHN H. MORRIS,

*Commissioners.*

*Re-direct; examined by Mr. HARVEY*—I will put in evidence this resolution of approval, which is dated New York, February 9, 1871, described "Exhibit G," and it is signed by Jacob S. Freer and F. J. Fithian.

Q. Did Mr. Morris take official action as a commissioner? A. Yes, sir.

Q. Was he present at any meeting at that date? A. He and I had a meeting on that subject; Mr. Morris was present when we were considering the question; we had a meeting on the day of the date in that certificate.

The CHAIRMAN:

Q. I understand there is a resolution upon which this certificate is based? A. Yes, sir.

Q. You hold your appointment as commissioner on this board by the action of the Croton board? A. Yes, sir.

Q. If I understand you right, Mr. Morris was present and voted for that resolution at the date it purports to be? A. No, sir; he declined to sign; he was opposed; was present at the discussion and opposed.

Q. And, therefore, did not sign this certificate?

*Cross-examination ; examined by Mr. COWING :*

Q. As to the condition of the road now, and what the public think of it, so far as you know, and its operation, how many dummies and how many passenger cars are there in operation, and what is the public opinion in relation to its management now, so far as you know? A. There are four dummies, and each dummy draws two passenger cars.

Q. So far as you know, is it popular or otherwise with the public?

A. So far as I hear, it is in favor with the public.

By Mr. LITTLE :

Q. The public are well accommodated by the cars and by the road ; they have cars enough and they are run often enough to accommodate the public? A. They run the cars as often as they can, but I don't think the public is accommodated at all ; they do the best they can with the machinery they have to accommodate the public.

Q. You think that road should be extended? A. I think that was the intention of the Legislature, in regard to that franchise, to run up to the Harlem river with a double tract.

*Re-direct examination by Mr. HARVEY :*

Q. Was there any other municipal authority of the city of New York, excepting the Croton board, for taking any action with reference to his appointment as commissioner, to his knowledge?

[Objected to as not seeing the object of the question.]

By the CHAIRMAN :

Q. Is there any other authority there? A. Not to my knowledge.

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ALBANY, April 10, 1873.

F. J. FITHIAN, being duly sworn on behalf of the committee, testified as follows:

*Examined by Mr. HARVEY :*

Q. State your name and business office while you was commissioner? A. I have given my name, my business place is 110 Broadway, and am an attorney and counselor-at-law.

Q. When were you appointed a commissioner on the Elevated railway in Greenwich street, and by whom? A. Appointed by Governor Fenton ; it was in the fall of 1867, or soon after in the spring of 1868 ; I should say it was quite late in the fall 1868.

Q. You retain the position to the present time? A. Yes, sir.

Q. When the commissioners inspected the Elevated railway to approve of its structure, in the first instance, what was the motor power? A. Steam located under ground applied by propelling cable to the cars.

Q. What was the date of the first inspection; about what time? A. It was the last part of June, 1868.

Q. Was the form of the cable then in use; that which had trucks, so called, connected with it? A. It was.

Q. Was any other form of propelling cable ever put to experimental use for propelling cars on that railway? A. Not to my knowledge.

Q. Were you aware that it was, at any time, proposed to have an experimental trial of the propelling cable without trucks? A. I never knew any such proposition.

Q. Never knew of such a proposition? A. Of such a proposition; that is to say, I have no recollection of any such proposition; I would not swear positively that some such thing might not have been talked of; officially, it did not come to my knowledge; I know that no such proposition was ever made to me officially.

Q. When was you informed that there had been a sheriff's sale of the railway and franchises, and by whom and about when? A. I cannot state the date, but it was very soon after such sale took place, and by some of the persons then interested in the railroad as its managers or directors.

Q. Parties in control? A. Parties in control.

Q. Please state the year when that occurred? A. I should say that as near as I can recollect it was in the latter part of the year 1870, in November.

Q. Were you given to understand that the sheriff's sale effected an important change in the management and control of the railway? A. I was given to understand that about that time and in connection with that, that the direction in the railway had changed in its personnel, and that the effect of the sheriff's sale was to transfer the possession of the railroad track, and its engines, and its propelling cable, and all its tackle and paraphernalia to other persons than had previously been in the control and management of it.

Q. Among such changes was the displacement of C. T. Harvey, as engineer and manager, mentioned and understood? A. I understood some time previous to that sheriff's sale that C. T. Harvey, the engineer and manager and projector of the railway, had resigned

his position as engineer and manager, and that such resignation had been accepted ; when that was I don't know ; it was previous to the sale.

Q. You understood that after the sale he had no farther official control or connection with the road, did you not? A. Yes, sir ; except that I understood he continued as one of the directors some time after.

Q. Were you applied to by parties claiming to control the railway by virtue of the sheriff's sale for permission to experiment with the dummy engine?

Mr. COWING—I believe there was no law requiring the parties in management to give such consent. I object to the question.

The CHAIRMAN—Let him answer it and see what they did do.

A. Yes, sir, in connection with my associates ; I was not applied to separately ; in connection with my associate commissioners.

Q. About what date did such application occur? A. It was on or about the 27th of October ; I would like to put this resolution in evidence :

“ *October 27, 1870.*

At a meeting of the commissioners, it was

*Resolved*, That the secretary be instructed to communicate to the railroad company, in answer to their request of date of October 27, 1870, for permission to experiment with a dummy engine as a motor on such railway, that in the opinion of the commissioners the company have authority so to experiment ; that the commissioners have no objection to such experiments being made, and that in reference to other matters obtained in such requests the commissioners are not at present prepared to determine, but are holding the matter under advisement.”

Q. Did you have reason to consider that C. T. Harvey was opposed to the trial of dummy engines, or otherwise? A. My best recollection of it is, I, individually, was under the impression that he was willing that dummy engines should be experimented.

Q. Did you subsequently ascertain that C. T. Harvey, at a meeting of the board previous to the passage of the resolution put in evidence, voted for having the dummy tried, in his capacity as director? A. I subsequently saw the minutes of the company, from entries in which I so understood.

Q. So learned? A. So learned.

Q. Did C. T. Harvey ever make any attempt to represent the railway or constructing company's affairs to you or the other commissioners after the sheriff's sale? A. No, sir.



Q. Did you, in February, 1871, take other action as commissioners upon the question of running dummy engines upon the railway? A. We did.

Q. After the sheriff's sale, and previous to the approval of dummies as a motor, were you informed that Mr. Harvey had abandoned all hopes of making this system of running cars on the railway by a propelling cable a success? A. I cannot say that I was so informed; I, however, did so suppose.

Q. That was your impression? A. That was my supposition.

Q. At the time or within a short interval previous to the approval of the commissioners referred to, as occurring in February, 1871, did you and the other commissioners inspect the railway in person, and together, as to the practical performance of dummy engines upon the railway? A. I, myself, did not, for I was at that time confined to my house with illness, although able to transact business at my house; I was informed, however, by my two associates, that both of them had inspected a road with the dummy engines, and examined them.

Q. Do you remember about what time this illness commenced? A. Some time in January, but I cannot tell what time exactly.

Q. What commissioners joined in the approval of dummies? A. Commissioners Freer and myself; Commissioner Morris voted against it, and here I desire to read the resolution: "On the 8th of February, 1871, there was a meeting of the commissioners; Commissioner Freer presented a permit, signed by himself and Commissioner Fithian, to allow the company to run dummy engines (see permit on file), and on motion of Commissioner Morris, it was resolved, that when the same was presented to the company, his objections be annexed to the same and handed to him at the same time," which I presume was done.

Q. Have you had any mechanical or engineering experience, any professional or mechanical? A. No, sir.

Q. Do you consider any of the commissioners as experts in mechanical or railway engineering? A. I don't.

Q. What are the business professions of the commissioners severally? A. Mine are given; I understand Commissioner Freer to be a physician, Mr. Morris a very extensive real estate broker, dealer in real estate.

Q. Did the commissioners have any power to compel experiments as to the best form of motor power upon that railway? A. If you



ask me for my opinion upon the subject, all I can say is, I don't know whether they did or not.

Q. In your opinion, did the commissioners have any power? A. In my opinion they hadn't.

Q. In forming their opinion did they rely officially and entirely upon the experiments to which their attention was called by the constructing company? A. They did, and they were compelled to for the reason that they had no authority to take possession of the road or to employ experts or to do any act of their own which would make experiments or be experiments independent of and other than the constructing company; and further, as the commissioners understood it, the law contemplated that the constructing company should experiment, and that it gave the commissioners simply the power to reject or approve on the conclusion of such experiment.

Q. If that company willfully suppressed due experiments contemplated by law, could the commissioners have assumed any legal power to remedy the evil? A. I am unable to answer that question because I don't know as there was any evil or anything to remedy.

Q. If due experiment hadn't already been made as contemplated by law, what power is there to compel such experiments? A. I am not able to answer whether there is any power or not.

Q. Did the commissioners consider themselves responsible for the actual inauguration of due experiments as mentioned in section one, chapter 855, of the Laws of 1868? A. The commissioners considered that they had not any power to inaugurate or carry out any experiment upon that road, which should take the road out of the control and management and custody of the constructing company; they considered that their sole power in the premises was to take such experiments and such evidences as they could obtain from experiments made by the company, which is from opinions that they could obtain from other persons in whose judgment they had confidence and from their own observation of practical results of the work as it was progressed with, and then to approve or reject such motor power as the company should decide upon.

*Cross-examined by Mr. COWING:*

Q. Did you understand that Mr. Harvey was the general manager, as a constructor and financier of the company, from the time you was appointed commissioner until he resigned? A. I did so understand.

Q. I think you stated you understood he resigned a short time before the sheriff's sale? A. I said some time.

Q. What did you understand was the reason or motive of his resigning? A. I understood that it was from differences existing in the company and dissatisfaction with his management.

Q. At the time he resigned, so far as you was advised or knew, what was the condition of the finances of the company? A. I know only from information received on one occasion from Mr. Harvey and from general report.

Mr. HARVEY—I object; the books and papers which were asked to be brought here would show all those matters, and it is entirely out of Judge Fithian's own knowledge.

The CHAIRMAN—I think, Mr. Cowing, you had better bring an abstract from the books.

Q. Did you or did you not, at that time, understand that Mr. Harvey had failed entirely to get money to go on with the enterprise?

Mr. HARVEY—I object on the same grounds.

Q. At or about the time Mr. Harvey resigned, did you understand that he had entirely failed to procure means to go on with the enterprise.

Mr. HARVEY—I object to it, because an understanding is not definite enough in matters of the kind, and positive proof can be obtained elsewhere.

The CHAIRMAN—If the witness has any facts upon which he predicates his opinion, he can state? A. I understood both from Mr. Harvey and other parties in the company that there were great financial embarrassments, and what they arose out of I didn't know.

Q. You speak of a change of a control in the managers of the road; what do you know in relation to the cause of that; why was that necessary, or why a change made; anything you know on the subject? A. In the first place the selling out of the property to another man would be a pretty good reason that it did change the control.

Q. I understood you to say in your direct examination that there had been a change? A. I meant mostly that the property passed into the hands of creditors.

Q. You understood the law to give a majority of the commissioners power to act on all matters that they had? A. I so understood it.

Q. What is the condition and reputation of the enterprise as it stands to-day? A. Well, the general impression is, that it is managed as well as it can be with its present facilities; this company

hadn't fulfilled their obligations to the public at all, and long before this they had held out to the public that they were able and that they would build a double track to Harlem, and in the opinion of the public and in the opinion of the commissioners they ought to have done it.

Q. Had they the power, under the law, to do that? A. Yes, sir.

Q. How long has the present company had full possession of the road with power to go on? A. The persons who now control and constitute the managing power in the present company have had the possession and control of the road ever since the sheriff's sale in November, 1870; they had just as much power before they were organized into a company as they have had since.

Q. Who was the purchaser at the sheriff's sale? A. I am not able to tell; I understood that it was some person who purchased for the persons who are now controlling owners of the road.

Q. Would you, as a lawyer, consider it safe for capitalists, who purchased under such a sale as that, a sheriff's sale, to go on and spend large amounts of money in developing the enterprise? A. That question depends upon such a variety of circumstances, which may or may not exist in a given case.

Q. What do you know about that sheriff's sale, in order to see whether you would, as a lawyer, consider it safe to put money in? A. The largest owner of the road, the man who owns the largest amounts stock in the new organization, stated to me as one inducement for the adoption of the new motor power, in substance, this: that he and his associates were the controllers of adequate capital to complete that road, that if the new motor should prove a success that they then proposed without delay to clean up the title to the road by vesting it in a new company, and when that was done they were prepared to complete the road without delay, and that they would have it built to Central Park before the winter of 1871; I believed that to be true, and I had no reason to disbelieve it to be true, except they haven't done it; at the time of the sheriff's sale there were then outstanding on the railroad two mortgages; one mortgaging the road and franchises to Thirtieth street, and under which had been issued bonds to the amount of somewhere in the neighborhood of \$750,000; those bonds, as I understood, were mostly held by these gentlemen who now control the road; at the time or soon after the time of the sheriff's sale, there was another mortgage upon the road, subsequently issued by the old company, covering the

whole franchise all the way, under which only about \$12,000 or \$15,000, under \$20,000, bonds have been issued, or ever have been issued, those two mortgages existing on the road at the time of the sheriff's sale; at or about the time of the sheriff's sale the old company, under the direction of the present managers of the new company, caused the whole road to be mortgaged by the third mortgage; I think the mortgage run to a trustee, and mortgage sold to Cowing, a sole trustee, payable in thirty days, I believe, made to secure somewhere about between three and four hundred thousand dollars of loan money; that mortgage was foreclosed by this gentleman, Mr. Cowing, as trustee; that mortgage was made, foreclosed as quick as it was due, and under which it was bid off by trustees again for the benefit of parties in interest; now, I understand, that on the foreclosure of that mortgage, the persons now managing this new company had the absolute power.

Q. The third mortgage, didn't you understand that foreclosure was subject to previous mortgages? A. Yes, sir, and I understand that the men who foreclosed the third mortgage, who owned it, had substantially acquired the control, if not of the bonds, of the first mortgages.

Q. Do you know whether the third mortgage foreclosure suit was contested or not? A. I know that an answer was put in to the action by some of the parties interested, but it never came to a trial, it was said, and the defence was withdrawn.

Q. Do you know when the sale took place on the third mortgage? A. I don't know as I can tell.

Q. What about the first mortgage, was there ever a foreclosure on that? A. I don't know as there was.

Q. Then you cannot tell when the present parties came into possession under these two foreclosure sales? A. Not the exact date.

Q. The fact was, the one sale took place on Dec. 6, 1871, and the other Jan. 2, 1872; after the foreclosure sale and purchase under that, was you consulted in relation to getting some additional legislation? A. Yes, sir.

Q. Did you think it advisable for the company to get some additional legislation? A. Yes, sir; I always think it advisable for every company to get all the legislation they can.

Q. Did the company succeed in getting that legislation in 1872? A. I understand they didn't.

Mr. HARVEY.—I have three or four questions which I would like

to have the chairman ask me, and it will explain some matters in connection with Judge Fithian's evidence.

By the CHAIRMAN :

Q. Mr. Harvey, do you intend to make any point here, that the commissioners have no right to adopt the dummy engine or motive power now in use? A. Yes, sir.

Q. Because the law didn't give them power to do it? A. No due experiments had been made as the law required.

Q. I desire to ask Judge Fithian some questions; Judge Fithian, in your opinion, as a commissioner, under the law of 1867, do you consider that you are restricted to the propelling cable as a motive power? A. We did so consider it.

Q. Under the law of 1868, did you consider that you could adopt any other motive power than the propelling cable? A. We did so consider it; the best construction we could give upon it was, that we had authority under that to adopt any other motor that we were satisfied with, after the company had made experiments that satisfied them.

Q. After all the light you had received from the experiments made of the propelling cable and other motor power, did you come to the conclusion that the dummy, the power now in use, was the better power? A. I did.

Q. That was the ground? A. Yes, sir; as to the good faith of this commission in everything, I propose to stand up to it; I understand there is to be some legislation to legislate this commission out of office; I shall positively object to its being legislated out without I am investigated; I want to be investigated, and have all my acts inquired into, and if I have done anything wrong or out of the way, I shall expect this Legislature to put me out.

Q. I don't understand that they have made any charge so far or had any evidence produced here before the committee charging any of the commissioners with any improper conduct. I think Mr. Harvey, day before yesterday, said they didn't intend to investigate the acts of the commissioners. It was stated yesterday by Mr. Pettengill, who was a director in the original company, that the members of the company acted in so fraudulent a manner towards its stockholders as to call for legislative interference and that it called for legislative interference. I would ask the witness what legislative interference was called for, in his opinion, if any? A. I don't see any legislative interference that is called for

in that respect, except I think it is just that the legislature should not do anything to injure the status of the stockholders; if they have got any rights I think they should be permitted to enforce them.

Q. Do you know of any wrong that the original company committed towards any of its members that has not a remedy at law?

A. I don't.

By Mr. COWING:

Q. What knowledge have you as regards the amount that was furnished to the construction company by Mr. Harvey? A. I don't know.

Mr. HARVEY—I think in my previous evidence I have said that I had the control of the company up to the time when the sheriff's sale took place; Judge Fithian in his evidence brings out a point here which has been overlooked; he says he understood I resigned before the sheriff's sale and the fact of why I resigned should be taken.

O. T. HARVEY, recalled for re-direct examination:

By the CHAIRMAN:

Q. Did you resign as manager and engineer of the railway at any time in 1870? A. I did; I think about the latter part of May or some time in June.

Q. What was the object of such resignation? A. It was to enable me to take the position of manager and attorney with full power of control in all respects, by a gentleman who undertook the contract of extending the road to Central park during that year, and was so appointed by him as his attorney, with full power to control the railway in all respects.

Q. Did you have more complete control of the railway after than before? A. I did after my resignation than I had before.

Q. Did the directors authorize this change? A. They did; it was done with their approval as will appear on the records of the company.

Q. How long did you continue in the latter control? A. Until the very hour of the sheriff's sale.

Mr. FITHIAN—I wish to have the stenographer note down that neither of these parties were making any charges against the commissioners.

ALBANY, *April* 15, 1873.

Committee met pursuant to adjournment.

IRA BUCKMAN, being duly sworn on behalf of the committee, testified as follows :

*Examined by Mr. HARVEY :*

Q. Please state your name, residence and occupation ? A. I live at 145 South Fifth street, Williamsburgh, my profession is that of architect and mechanical engineer, and have spent a great deal of my time since 1842 in railroads and the machinery connected with railroads, more or less ; at that time I was engaged on the Boston and Albany railroad, building two sections from Albany to Boston.

Q. Were you a subscriber to the original experiment capital of the West Side Elevated railway ? A. I was.

Q. Please state the amounts with the dates of payments ? A. I paid my first payment, it appears by a receipt of May 9th, 1867, and from that time until March 14th, 1868, in four several payments, the aggregate of which was \$7,500 ; the first date, May 9th, and the last date of the receipt that I have is March 4th, 1864 ; paid it along at different times as it was called for by the action of the company.

Q. Did you sell any portion of your interest, if so, when ? A. Well, somewhere between the dates that I have given you, I sold a friend of mine thirty-eight shares, amounting to \$3,800 ; I subscribed for was termed at that time one interest, and I divided that with a friend of mine, and that was subdivided with other parties again.

Q. At what rates did you sell ?

Mr. LITTLE—I object. It don't make any difference so far as this investigation is concerned whether he sold at par or fifty cents on a dollar. (Objection sustained.)

Mr. HARVEY—Isn't it competent to show the value of the investment at that time and what was the public estimate of it ?

The CHAIRMAN—Ask what its value was at that time. Put the question direct to him.

Q. What might be considered as the market value of the stock at that time ?

Mr. LITTLE—Does he know ?

Q. You can express your opinion on it ? (Admitted.) A. I sold mine for par ; 100 cents on a dollar ; all that I parted with at that time ; they allowed me the interest ; I had a dealing with them.



Q. You mean par and interest? A. Yes, sir; what accumulated up to that time; seven per cent lawful interest.

Q. You are then a stockholder, at the present time, for thirty-seven shares? A. Thirty-seven shares; I am an executor of an estate that is left, for that thirty-seven shares, which amounts to the same thing; it is a family affair.

Q. What do you understand to be the present market value of your stock? A. From the best status I can get hold of, it is not worth anything; not the paper that it is written on; I have tried, and I cannot find anybody that wants it at any price.

By the CHAIRMAN:

Q. When did you make this transfer? A. The transfer was made between the dates of May 9, 1867, and March 14, 1868; I cannot give you the exact dates; it is between that time.

Q. What do you consider the cause of the present depreciation of the value of your interest? (Objected to.)

The CHAIRMAN—Strictly, I suppose that not to be hardly a proper question.

Q. Do you consider that the parties now in control of the railway are responsible for, to a greater or less extent to the market value of your investment, and if so, why? A. I should consider that the stock of incorporated bodies is depreciated in value, it is understood by the parties in power; for instance, the New York Central railroad, when in one man's hands, it is not worth so much as in others' hands; I consider the depreciation of my investment is owing to the manner in which the thing is managed by the parties in power.

Q. Do you know of any peculiar hardships entailed upon the original experimental stockholders by reason of this mismanagement?

Mr. LITTLE—I object to the question; let him state what he does know about it.

Q. Whether you know of any peculiar hardships entailed upon the original experimental stockholders or their representatives by reason of this mismanagement you testify exists? (Admitted.) A. I do know that parties who I sold this stock to—I know of one case where the children have passed my door this winter without shoes upon their feet for the want of money that their father has paid into this concern; I consider it a hardship, I consider it a very great hardship, owning a majority of the stock to meet any other organization where we can, for the operation of the elevated railway, for them to come in the old organization and vote us down and



elect their own officers and control the machinery of the institution, and not represent a dollar's worth of property in fact ; I am decidedly in favor of a minority representation ; I am to-day suffering for the want of money in my business relations—money that I have put in there as an individual.

Q. Do you consider that the West Side Elevated Railway Company, the present organization, is entitled to the route of extension on the original route of the West Side Elevated railway, without any pro-rata allowance to all those who paid in money, or other valuable consideration, toward the original illustrative development of the pioneer elevated railway ? (Objected to.)

Mr. HARVEY—I would like to have it in the question thus: *The New York Elevated Railway is or should be entitled.* Whether you think it would be right for that company to receive such exclusive rights at your expense ?

Mr. LITTLE—I object to it ; I present the resolution.

Objection sustained.

Q. Do you consider that the public interests require that the Legislature should recognize the equitable rights of the experiment stockholders, in the benefit of future operation or extension of the West Side Elevated railway ?

Objected to.

Mr. HARVEY—I want to have the witness state whether he feels as though he had some equitable rights in that railway.

Mr. MAGUIRE—That would be merely an opinion.

The WITNESS—I have been to this gentleman, Mr. Cowing, and asked to have that stock recognized ; they have refused to say to me, you can go on here and make these experiments that the State guaranteed to you that you should, through that charter ; we have never consummated our experiments on that half mile of the railway.

Q. When did the present party come into control ? A. January, 1870.

Q. Have you any knowledge under what circumstances they came into control ? A. By sheriff's sale and by a notice that appeared in the papers that it was to be sold for the benefit of the creditors ; I attended one of those sales ; the road then brought enough to pay us all off, but I didn't believe they had any right to sell that half mile which was for us to make experiments on, for our money built it.

Q. Had the original company become involved ? A. Not on that

half mile of the road that we had the right to make the experiments on.

By the CHAIRMAN :

Q. What section of the road was sold under the sheriff's sale?

A. They claim it was all sold.

By Mr. LITTLE :

Q. Do you know? A. No ; I claim they had no right to sell the half mile, because that was a special grant for us to make the experiments on. •

Q. Was that half mile in fact sold under this sheriff's sale? A. I was standing at a distance and don't remember the words that the auctioneer used in selling.

Q. Do you know whether that half mile was under the control and management of this new company? A. I have assumed that they did assume management of the half-mile, and have kept it ever since.

By the CHAIRMAN :

Q. Subsequent to that time? A. Subsequent to the sheriff's sale, but shortly after; and used it to store coal cars on, and chain cables; now they are running their cars over that half mile.

Q. When did they begin doing that? A. I could not tell you; it is not a year; eight or nine months probably.

Q. How many shares of stock do you now hold? A. I have now thirty-seven shares; as the executor of thirty-seven shares.

Q. Executor of whom? A. Of my wife's estate; the thirty-seven shares; morally I consider, if I ever can, to refund that money to it.

Q. You regard the stock of the road now as worthless? A. I do; this stock really showed our interest in that half mile of the railway that we paid for ourselves; that half mile of railroad was built, and some experiments made on it, I guess long before these gentlemen that now assume control of it had any knowledge of it; unless they had an eye looking at it.

*Examination continued by Mr. LITTLE :*

Q. Was this stock that you speak of sold by you in the market?

A. At private; by me it was sold.

Q. And to some member of your family? A. One member; a brother of mine became interested in that thirty-eight shares that I sold; the other two parties are outside; one was a Mr. Winebergh, who is, since, dead.

Q. Are they a connection of yours? A. No, sir.

Q. Stock of what company did you sell? A. Experimental stock, or experimental scrip.

Q. Was Mr. Harvey the manager of that company at the time of this sale? A. He was known as the managing man around the structure.

Q. Was he not the manager or vice-president of the company? A. I think he was vice-president; he was known more particularly as the engineer of the company.

Q. Why do you regard your stock as worthless? A. Because there is nothing that represents it; the gentlemen that has one-half mile of the road—it does not represent anything; it is taken away from us.

Q. Does the present company, known as the New York Elevated Railway Company, claim to own that half mile under the sale made by the sheriff? A. I cannot tell; I think there has been no less than three or four sales; under some of these sales they claim to have gained possession of that half mile of the road.

Q. Has this scrip that you present here ever been merged in what is known as preferred stock? A. No, sir; I suppose that is preferred; when parties asked me why I did not get other scrip, they said there was other, and I said that was no better than this.

Q. Have you not had the preferred stock issued to you as receipts; have you never had your stock? A. I understand that to be my stock; I never have seen that other kind; I have heard there was other; there has been none issued to me.

Mr. HARVEY—I wish the following papers, marked Exhibits O and P, in my evidence.

Mr. LITTLE—We object to them.

The CHAIRMAN—We will admit them.

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*April 16, 1873.*

J. V. L. PRUYN, sworn:

By Mr. HARVEY:

Q. Do you hold any official positions in the present State government? A. I hold two positions which proceed from the government; I am president of the State Board of Charities and Regent of the University.

Q. Were you officially connected with the corporation which con-

structed the ship canal at the outlet of Lake Superior? A. Yes; I was director, secretary and treasurer.

Q. What was the magnitude of the work? A. It was one of great interest and importance to the upper part of Michigan and the north-west; the canal was not very lengthy, but the locks were considered at that time as the largest in the world.

Q. What was the connection of C. T. Harvey with that work? A. My recollection is that C. T. Harvey was recommended by Governor Fairbanks, of Vermont, and his brother, and was appointed by the directors to the general superintendency of the work.

Q. Did the general superintendency of the work include engineering duties? A. Incidentally, of course, in the construction of the canal; he was not considered as a professional practical engineer; the work was one of great magnitude and extraordinary character, and was generally considered as such.

Q. What amount of funds passed through his hands for disbursement during the work of construction? A. He was charged in account with about \$876,000 in round numbers, discarding fractional amounts.

Q. In what estimation was he held by the company as engineer as well as agent? A. My recollection is, that he had the full confidence of the board, and that they, at the conclusion of the work, passed a vote of thanks, on account of the superior manner in which he had discharged his duties; he displayed great energy and ability in the main.

Q. Who was president of the canal company? A. Erastus Corning was president during the time of the construction of the canal.

Q. Do you identify the letter herewith submitted as signed by Mr. Corning? (Marked Exhibit Q.) A. Yes, sir; that is Mr. Corning's signature.

EXHIBIT Q.

"ALBANY, *April 6, 1866.*

O. P. ROOT, Esq.:

DEAR SIR.—I have been acquainted with Mr. Charles T. Harvey since 1853, when he was appointed general agent of the St. Mary's Falls Ship Canal Company, of which I was the president. Mr. Harvey projected that company and attended to the granting of its charter by our Legislature, as well as the distribution of its stock and subsequent organization. Mr. Harvey received the thanks of the company for his engineering abilities, on the completion of that great work which was placed in his charge by the company. His

experience in corporation affairs has been extensive, and any representations that he may make can be relied upon with entire confidence.

Respectfully yours,

ERASTUS CORNING."

"I certify that the foregoing is a true copy of the document marked Exhibit Q.

ALBERT L. G. SWEET,  
*Clerk Com.*"

[Attest.]

ALBANY, *April 22, 1873.*

J. A. COWING recalled:

*Examined by Mr. LITTLE:*

Q. For what purpose was you employed? A. I was asked to examine into the affairs of the company, with a view of determining what could be done, or what it was best to do in relation to the affairs of the company.

Q. What was the situation and condition of the company at that time? A. Previous to this time I had no knowledge of the affairs of the company, but had been told that it was embarrassed financially; I soon learned that it was nearly a hopeless wreck; the road was earning nothing, no cars were running upon its track, the company had no motive power or rolling stock that could be used; it had no money, no credit, nothing upon which it could raise money. Its structure was apparently a useless incumbrance in the street, and fast becoming a nuisance. A bill to repeal its charter had passed the Senate, and was before the Assembly. This bill required the immediate removal of its structure. The liabilities of the company at that time were about as follows: 4,577 shares of common stock, \$457,700; 2,000 shares of preferred stock, \$200,000; 1,500 first mortgage bonds, of \$500 each, \$750,000; 200 second mortgage bonds, \$500 each, \$100,000; a judgment in favor of Mr. Tracy and his associates, amounting, with interest, to about \$230,000; a floating debt, including past due interest coupons, partly estimated, \$162,300; total, \$1,900,000. The assets of the company, consisting of three and a half miles of unfinished single track road, some machinery and movable property, and its franchise. I had a competent engineer estimate the value of all this, in case the bill before the Legislature should become a law, and he estimated it worth about \$75,000; Messrs. Tracy, Dows and their associates had

advanced the company, in money, between October, 1869, and July, 1870, about \$200,000; the judgment mentioned in the liabilities was obtained in January, 1871, for these advances; this money was expended while Mr. Harvey was in the management of the property; judgments in favor of other parties were obtained against the company in the fall of 1870, and the personal property was sold under some judgments, I think in November, 1870; in April, 1871, the road property and franchises of the company were sold by the sheriff, upon an execution issued upon this judgment in favor of Mr. Tracy and his associates; Mr. F. H. Tows purchased at this sale, as he had at the previous sale, the personal property; after the judgment in favor of Tracy and others, in January, 1871, they (Messrs. Tracy, Dows and associates) continued to furnish money to protect and preserve the road and property, and to keep the enterprise from total ruin; among other things, they provided a dummy engine and three small passenger cars; the amount they thus furnished, after the judgment and before the property went into the hands of the trustee, was \$19,400 and a little over; a portion of this was furnished before and the remainder after I was employed; this dummy and these cars were upon the track in April, 1871; a train commenced running for passengers April 20th, 1871; experimental trips had been made before; the road was operated between Dey and Twenty-ninth streets only, with no stations for taking and leaving passengers except at the termini; from 200 to 300 passengers were carried daily at the beginning; soon after this train commenced running, I took possession of the road and property, as trustee, under the third mortgage of the company; Messrs. Tracy, Dows and associates placed their dummy and their cars in my hands at the same time, and indemnified me against risk and loss, and authorized and requested me to run the road for this trust; I commenced operating the road, as such trustee, May 19th, 1871, and run the single train every business day to and including January 2, 1872, nearly nine months; since that time the present New York Elevated Railroad Company have had undisputed possession, and have operated the road. There was a small profit from earnings, over-running expenses proper, while I was running the road as trustee; but the earnings were not sufficient to pay the repairs and other necessary disbursements in connection with the trust, and in taking care of the property. The dummy, as a motive power, was a success from the beginning. I run the one train, furnished by Messrs. Tracy and his associates every business day, while

I operated the road as trustee, and made every trip upon the time table, and, excepting two or three trips, every one was made on time. The time was fifteen minutes, three miles. In the excepted cases, from some slight derangement in the machinery, the train was a few minutes behind time, but in time to make the next trip. The number of passengers carried daily, while I thus run the road as trustee, gradually increased to about 500. With the present company it has farther increased to nearly 3,000 per day. The use of dummy power continues to be a success. The present company has four dummies, and eight fine new passenger cars upon this track. I was trustee under the first mortgage of the company, and foreclosed both mortgages. Messrs. Tracy, Dows and other associates now own the whole of the stock in the new company. There are about fifty stockholders in the new company. Some have united since the foreclosure sale; they were permitted to do so by Messrs. Tracy, Dows and their associates, upon the same terms as others before the sale. All that have done so have united upon the same terms as Messrs. Tracy, Dows and Scott, upon the like securities. Of the 1,500 first mortgage bonds, parties holding 1,417 have thus united. Parties holding forty-five more have signed a paper agreeing to unite, leaving only thirty-eight bonds or \$19,000 outstanding. Messrs. Tracy, Dows and associates also hold 183 of the 200 second mortgage bonds. Also about 1,500 shares of the 2,000 shares of preferred stock. Also more than half of the common stock and nearly all of the floating debt of the old company; these same parties have furnished more than \$100,000 in money the past year for putting the track in order, building stations, workshop, providing rolling stock and other necessary purposes, and they are now extending the track to Thirty-fourth street and making other improvements at a cost of more than \$50,000; I have with me, and now exhibit them, the judgment roll in both foreclosure cases and other papers connected with these foreclosure suits.

Q. Have you examined the books of the old West Side Company with reference to the accounts with Charles T. Harvey and S. O. Jennings? A. I have; I find that Mr. Harvey drew a salary of about \$5,000 a year while he was in the employ of the company; besides large extra allowances in cash, he seems to have been paid over \$27,000 for patent advances; upon inquiry of Mr. Delavan, the attorney of the company, I learn that there was a contract from Mr. Harvey to the company whereby he was to convey certain patents



to the company which have never been conveyed; I don't find that Mr. Harvey ever paid in a dollar into the company, except some credits of money that he had previously received from the company; I don't find that Mr. Harvey owns any of the first mortgage bonds; he has but two of the second mortgage bonds, amounting to \$1,000, and about one-fifth of the common stock standing in his name and of his family, for which I don't find that he ever paid anything; I find also that Mr. Jennings received a salary of \$2,500 a year for considerable time in the employ of the company, with considerable extra allowances; I don't find that he has any of the bonds or stock of the company.

Q. What has been Mr. Harvey's course in relation to the property since you were employed in reference to it? A. He has uniformly opposed whatever has been attempted to be done since I came in; in connection with others he contested both foreclosure suits, and brought a suit in opposition to those foreclosures against the company and against me, in all of which they were defeated in court, except in one case, and in that I permitted them to withdraw their suit upon their paying the cost and agreeing to unite in the new organization to save the enterprise; in this legal proceeding I refer to suits carried on in the name of F. P. James, where Mr. Harvey was his principal witness.

Q. Were you present when Mr. Charles T. Harvey gave his testimony before the committee? A. I was.

Q. Did you hear his answer to question ten, "what clause and section of the act of 1868 have not been complied with?" A. I did.

Q. Have you examined the laws referred to by him? A. I have.

Q. Is there anything in those laws that requires the constructing company to experiment in regard to motive power? A. I find nothing in the laws that requires the company to experiment; the law authorizes experiments to be made.

Q. Are you conversant with the mode of operating railroads in the United States? A. I am.

Q. Do you know of any that are operated with stationary power and endless cables? A. I don't know of any; I have heard that some incline planes are so operated.

Q. Have you, since you have been connected with the elevated railroad, met with and conversed with engineers on the subject? A. I have met many and never found one to recommend stationary power and endless cables.



Q. From the books and papers of the old company, how much money appears to have been expended during the time that Mr. Harvey was chief engineer and manager of the company? A. I think not far from a million of dollars.

Q. What portion of this was expended upon the stationary power and endless cable in experimenting in relation to it and in relation to patents? A. I think from one-third to one-half of the amount.

Q. What was the whole property and franchise deemed to be worth by Mr. Tracy and his associates, at or about the time of the foreclosure sale, in view of going on with the enterprise? A. It was not deemed by them to be worth to exceed \$300,000.

Q. You speak of the company being embarrassed; in what respect was it embarrassed? A. It was embarrassed from an entire failure of the stationary power and endless chain in running the cars.

Q. You have seen the road operated by the endless chain and dummy engine? A. I never saw it operated with the endless chain; I know from the appearance of the machinery that it had been when I went there.

Q. From your knowledge of the operation of the road by the endless cable, and by your knowledge of the road operated by the dummy engine, which do you think is the preferable? A. I think the dummy engine decidedly preferable.

Q. Does not the operation of the road by the dummy engine give universal satisfaction? A. It does give very great satisfaction.

Q. Have you ever heard of any complaint made by reason of the road being operated by the dummy engine? A. There has been but little or no complaint for the last two years, and the plan now adopted seems to be universally approved.

Q. Are you familiar with the provisions of chapter 855 of the Laws of 1868, and chapter 489 of the Laws of 1867? A. I am.

Q. From your knowledge of those laws, can you state whether they have been properly and fully complied with, as the public interest involved may require? A. So far as I know they have been fully complied with on the part of the company.

Q. Have such laws or any part of them been neglected or evaded? A. They have not to my knowledge; I think they have not been; I have had the general control and management of the road since May, 1871, and my instructions from Messrs. Tracy, Dows and others have been always to endeavor to comply with the law, and I have done so to the best of my knowledge.

Q. Are there any vacancies now existing in the commission? A. There is one vacancy.

Q. Do you know why that vacancy has not been filled? A. I understand it is because there is some doubt about the power of the Governor to fill it.

Q. Then it does not now exist on account of any wish or desire on the part of the company? A. It does not; the company requested Mr. Morris not to resign, and tried to get him not to resign, but he insisted upon resigning; there is a clause in the bill introduced into the Senate by the present company, authorizing the Governor to fill that vacancy.

Q. Were you present at the time Mr. C. T. Harvey was examined in this matter? A. I was.

Q. Will you state, if you know, who proposed the questions to him? A. The questions were in Mr. Harvey's handwriting; I saw Mr. Harvey hand them to the chairman of the sub-committee.

Q. Were the questions read off to him by the chairman of the sub-committee, or did he give the questions to the stenographer himself, and answer them? A. The most of the questions were handed to the stenographer, and he read them, and then Mr. Harvey gave his answers from a memorandum in his own hands.

Q. Then, in other words, the questions and answers were both propounded and answered by him? A. Mr. Harvey appeared to be his own questioner and answerer.

Q. Did any other person than Mr. Harvey examine or appear to take interest in testimony given against the company in this investigation? A. Mr. Harvey seemed to ask all the questions of himself and of others; the questions that were put to Mr. Jennings were apparently in Mr. Harvey's handwriting, and in the same way of questions put to himself.

Q. Have you had any offers from Mr. Jennings, or propositions made by him to you, in relation to the Legislature, for an additional grant to your company? A. I have had several conversations with Mr. Jennings in relation to it.

Q. Will you state the substance of those conversations? A. He said, in substance, that he had done with Mr. Harvey, and should probably never speak to him again; that, if I would pay him, or have Mr. Tracy and his associates pay him certain claims that he pretended to have against them (he wanted about \$10,000), he would go in and get the bill, and that unless I did, I could not get it;—I

said to him if he had any claim against Mr. Tracy or Dows, they were amply able to pay it, and if he would state it, what the claims were, on paper, I would present it to them, and if it was fair and right I would do what I could to have him get it, but in this indefinite way I looked upon it as mere black-mailing, and I would not go to them at all ; that was the substance of my language to him.

Q. Did you understand from him that if the company employed him he would cease pressing all opposition to the company ? A. I did.

Q. Can you be mistaken as to his meaning ? A. I cannot ; there is no question about it in my own mind.

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ALBANY, *April 24*, 1873.

Before the sub-committee of the judiciary.

C. T. HARVEY, recalled.

*Examined by Mr. COWING :*

Q. What furnace company are you president of ? A. Northern Iron Company of Michigan.

Q. Is that company now in full operation, and what is its capacity for doing business ? A. Well, its capacity is about thirty tons per day ; it is now being repaired with a view of going into blast.

Q. How long has the English engineer, Stevenson, been dead, who is referred to in one of these exhibits ? A. It depends upon which one you mean.

Q. The same one that you do in your testimony ? A. There were two of them, father and son.

Q. Which did you refer to ? A. I referred to the senior ; my impression is he has been dead about twenty years ; it is simply an impression.

Q. Is there any road constructed under his engineering with cables and stationary power ? A. There was one in which he occupied the position of consulting engineer.

Q. That mode of operating it was abandoned, was it not ? A. It was superseded by locomotives.

Q. What road do you know of that is operated now with stationary power by cable ? A. There is a section of a road running into Liverpool operated in that way ; it is about, or in the neighborhood of a mile long ; that portion is operated in that way.

Q. Do you know there is such a way of operating in that way?

A. I know it from information.

Q. Do you know of any road from actual knowledge? A. The Delaware and Hudson Canal Company operate about forty miles in that way; they did a while ago; it was not wholly with wire cable; it is what is called a gravity road; in all of those roads the cables are hauled on inclines.

Q. Was that road an incline? A. It was where the cable was used.

Q. Do you know of any road, except those on inclined roads, that are operated in that way? A. I do not.

Q. In your answer to question No. 22 you say the stock was wiped out; what do you know about that being wiped out? A. My information comes from different stockholders, who have had conversation with J. A. Cowing.

Q. Nothing of your own knowledge? A. Nothing further, except seeing the advertisements of foreclosure sales, attending one of them, and understanding their general effect.

Q. They were wiped out then by the foreclosure of mortgages? A. I cannot say whether they were or not; it is generally supposed to be the effect of mortgage foreclosure sales.

Q. (Referring to question No. 10), What section or clause of the law of '67 or '68 required the construction company to make experiments in relation to propelling by cable or other motor, and to what extent to make experiments? A. The first clause, section two, of the law of 1867. (Witness reads from the Session Laws.)

Q. Was that law changed afterward? A. That law was modified by the first section, chapter eight, clause fifty-five, of the Laws of 1868 (witness reads law); the new experiment is therefore obligatory upon them to change their motive power, and I assert the use of that experiment has never been made; that provision has never been complied with.

Q. Was there any other law requiring the constructing company to expend money in experimenting? A. Nothing but what is contained in that first section of the last named law.

Q. That merely permits it; nothing that requires it; did you contest the foreclosure suits in this case? A. I did not.

Q. Do you know who did? A. My impression is it was a Mr. James, in one case in which I was a witness.

Q. You was a witness for Mr. James, in that case, was you? A.

I don't know that I was a witness for Mr. James; I was a witness in the case.

Q. Would it interfere with the present working of the track now to make experiments with the cable and stationary power? A. My impression is, it would not seriously.

Q. In what way could the present dummies and cars be run, while you were experimenting? A. By steam.

Q. As they now are? A. Yes, sir.

Q. You say, in your answer to question No. 12, on opening the line in November, 1870, "it was crowded with passengers;" how many passengers were carried in a week, day or month, while you were using the cable? A. I decline to answer that without reference to the company's books.

Q. Can you tell the cost, or about the cost per day, running it that time? A. Could not.

Q. How many stationary engines were there? A. Six in use.

Q. In your exhibit to question No. 14, \$200,000 is mentioned to be furnished by Tracy and Woodard; how much of that was furnished? A. My impression is about \$175,000, under and acknowledged to be under that agreement; Mr. Woodard came to me privately and stated to me that he thought Mr. Tracy was treating me very unfairly, and handed me, I think, about \$8,000 of his own money, which he said must not be considered as part payment on the written agreement, and notes were made payable to him for that amount, which was the last that I was aware of any settlement having been made, so far as his private funds were concerned; I was subsequently informed that Mr. Tracy claimed that private funds of Mr. Woodard, as claimed upon the agreement signed by them together, and that the company finally allowed it as such payment, but Mr. Woodard, in making the payment to me, gave me to distinctly understand that he considered it was not in the light of a payment on that agreement, but on account of the losses and delays which I had met from the non-payment of the sum specified in the written agreement.

Q. Did you not, in your testimony of the foreclosure suits, state how much was advanced under that agreement, and did you not state between \$198,000 and \$199,000? A. I have no recollection of doing so.

Q. Do you know of any part of that money being returned to parties? A. No, sir; I do not.

Q. How much of the stock of the old company did you or did

you not have or own, and how much and what did you pay for it?

A. The company issued to me \$100,000; of its common stock the payments were in consideration of my personal services, and use by the company of certain patents which belonged to me and was in pursuance of a contract between myself and the company, which was unanimously ratified by a meeting of the stockholders and directors to which it was submitted in the form in which it is now to be found in the company's records; it provides for the issue of that stock pro rata.

Q. What salary did you receive while you were there as acting manager? A. Four hundred dollars per month part of the time; and part of the time \$5,000 per year.

Q. Did you receive sums in money besides that for extra services? A. None for extra services that I recollect; I cannot answer very decidedly without reference to the books.

Q. If not for services what did you receive it for? A. I should decline to answer that without reference to the books.

Q. Did you receive large amounts for patent services, or did you not use large amounts of the company's funds for these purposes?

A. The directors authorized the purchase of several patents from other parties for which various sums were used.

Q. About what amounts? A. I could not state without reference to the books.

*Cross-examination by Mr. JENNINGS:*

Q. What was the actual cost of the cable machinery used in that railway? A. I can state definitely with reference to the portion built after the experiments approved by the Governor were completed; previous to that a good deal of the machinery used was borrowed, for which the precise cost could be given, I will give in detail: from Cortlandt street to Thirtieth street, distance three miles, there were six engines placed in three vaults; the engines were contracted at \$1,500 apiece, making \$9,000 for the engines; the boilers were contracted, I think, on an average of \$1,800 apiece for six, making \$10,800; the cable was purchased for \$6,000; the trucks were contracted at thirty dollars apiece; there were 250 of them, making \$7,500; the vaults were built by contract, and cost in the neighborhood of \$2,500 apiece for the three, on an average, making \$7,500; this was the actual cost of the cable machinery; one more item I will estimate on: the shafting or driving wheels would average about \$2,500 a vault, making \$7,500 more; the total

being \$48,300 ; the work to be done over again could be done at a reduction of about thirty-three per cent, costing more then, because the machinery was of an unusual style.

By Mr. COWING :

Q. You say the cost of the cable from Cortlandt street to Thirtieth street was how much ? A. \$48,300.

Q. Does that cover the whole of the machinery ? A. Yes, sir.

Q. How much did the other half mile cost ? A. I could not state ; no contracts made.

Q. How much did the whole of it cost, on that half mile how much was there expended ? A. I could not say without reference to the books ; it was \$200,000 ; but that involved many other expenses.

Q. At that time only the half mile was built ? A. That was it ; the machinery, however, was calculated for operating tracks on both sides of the road.

Q. What machinery do you refer to ? A. The cable machinery in the vaults for operating double tracks, one on each side of the streets and avenues north of Cortlandt street.

S. O. JENNINGS, recalled :

By Mr. COWING :

Q. What do you know of your own knowledge of the motives as stated in answer to question No. 8 ? A. I only know from their conversations to me at different times and from Mr. Tracy and Mr. Wallace, president of the company, of their hostility toward Mr. Harvey, probably six months prior to the sale or more, conversations I held with them.

Q. What is your personal knowledge of the matters stated in answer to question No. 10, with regard to the sheriff's sale ? A. My knowledge of that sale is derived from personal conversations with Messrs. Tracy and Wallace ; I was requested by them to attend to that sale for the purpose of ousting Mr. Harvey and getting the road in their possession ; I have left a copy of Exhibit I with the clerk ; the original I have.

Q. You say you was offered \$50,000 in New York city bonds ? A. If I would retire or consent to the passage of the repeal.

Q. Who offered you the \$50,000 ? A. I was informed by Erastus Corning that \$50,000 was deposited in his hands and it was ready for me if I would leave Albany and consent to have the charter repealed.



ing and calling upon the members of the Legislature and having consultations at his private office of which he informed the president of the elevated railway of that fact; Mr. Corning did himself in the following July, I think, at the St. Nicholas hotel, New York city.

Committee adjourned to meet on Tuesday, April 29, 3.30 o'clock P. M.

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ALBANY, April 29, 1873.

Testimony taken before the sub-committee of the Assembly, with reference to the West Side Elevated Railway.

JAMES A. COWING, recalled :

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*Examined by Mr. LITTLE :*

Q. Were you present when Commissioner Fithian testified before the committee on April 10th? A. I was.

Q. I believe he stated that the present company hadn't, in his opinion, fulfilled their obligations to the public, because they hadn't built a double track road to Harlem; what are the facts in relation to that matter? A. I believe he did so state in his testimony.

Q. Why hadn't they built it? A. The present company was not organized until October, 1871; the papers were not filed, I think, until in December, 1871; they purchased the present road and came into possession on the 3d of January, 1872; at that time there was an unsettled matter before the Legislature, whether the charter should be taken away and the road be taken down; their first attention was turned to that, and at the same time to secure some additional legislation that they proposed they wanted.

Q. Then it was owing to the condition of affairs of which you speak? A. It was owing to the condition of the property; they didn't feel it safe to go on and put in money at that time.

Q. What has the present company done since it came into possession of the road? A. Very soon after they came into possession they ordered rolling stock and ordered the present track to be completed; it was in an unfinished state; they have spent something over \$100,000.

Q. What do the company propose to do now? A. They have under contract the company's road as far as Thirty-fourth street;



they propose, if they get the legislation they ask for this year, to go on and carry out the purpose of the charter and extend the road.

Q. Commissioner Fithian stated that the persons who now control the present company have had control of it since the sheriff's sale in 1870, and had just as much power before the organization of the new company as since; what are the facts in relation to that statement?

A. They had no such control as would warrant them in putting money in until after their purchase on the 3d of January, 1872; they were in control, only that they and their friends were a majority of the directors of the old company; that the affairs of that company were such that it rendered it unsafe to put more money in at that time.

Q. He also stated that at the time of the sheriff's sale, in 1870, the \$750,000, the first mortgage bonds, were mostly held by the gentlemen he named controlled the road; what do you know about this, and what is your means of information? A. 'At that time, the time of the sheriff's sale, neither Mr. Tracy, Scott nor Dows, who own a majority of the stock in the present company, held one of these first mortgage bonds; didn't hold one of them.

Q. You know that of your own knowledge? A. I know that of my own knowledge, for I know where the bonds are.

Q. Who are controlling stockholders and directors in the present company? A. John F. Tracy, David Dows and Wm. L. Scott own a majority of the stock; one other, D. N. Barney; they all together own over two-thirds; the remainder of the stock is held by forty or fifty parties, in small quantities.

Q. Do you know what their position and standing is among business men, men of means? A. They are, all of them, men of reputed large wealth; Tracy's position is that of president of the Rock Island and Chicago, and North-western railroads; those two roads have under their control more miles of road than the New York and Harlem and Hudson River, and Erie combined; Mr. Dows is one of the largest produce merchants in the country, probably the largest receiver of flour and western produce; Mr. Scott is a large manufacturer of coal and iron, and also concerned in railroads, and at present the mayor of Erie, Pa.; D. N. Barney is largely connected with the express and telegraph business; all four are men of reputed large wealth, and stand very high in public estimation, I should say.

Q. How did they come to own the first mortgage bonds they now

own of this company? A. They had advanced the old company a considerable amount of money, after the first mortgage bonds were mainly sold or pledged, and in that way were interested in the securities of the company, and after it got into financial difficulties in attempting to save the road, they proposed to each holder of the first mortgage bonds to join them in a new organization for that purpose; some of them preferred not to join, and in such cases they made a proposition to them for their bonds, and some parties sold their bonds to them, not to a very large amount, however; a large number of them united; they never have been large holders of these bonds.

Q. Do you know what their wishes were in regard to the holders of these bonds and securities of the old company, and how their wishes were carried out? A. They didn't desire to purchase any of the first mortgage bonds; they desired to have the holders join in the new organization upon a basis that had been agreed upon, and every holder, whether he has had one bond or more, has had the opportunity of so joining; not only before but since the foreclosure sale, that opportunity has never been withdrawn; every one can come in upon precisely the same terms that they could before the foreclosure sale; they only purchased of those who preferred not to join in the new organization, and that reluctantly.

Q. How long have you been in business? A. Something like forty-five years.

Q. What has been the general nature of that business? A. For the most of the time it has been mercantile business and other commercial matters connected somewhat with railroads and banks, and other matters.

Q. Can you give us any idea as to what the extent of that business has been? A. It has at times amounted to millions yearly, and sometimes millions of dollars monthly.

Q. Have you examined the books and papers of the West Side Company from its organization to the time of the sheriff's sale in November, 1870; I refer to the period during which Mr. Harvey had the control of its affairs? A. Those books and papers have been present in the office where I could have examined them any time in the last two years, but I have never examined them much until since the introduction of the resolution into the Assembly.

Mr. HARVEY—I object to it, without producing the books.

Q. What condition are they in?

Mr. HARVEY—All matters connected with these books, so far as they are not produced, is improper, and I object to it.

The CHAIRMAN—I think he may state it.

A. They are in a very bad condition ; very irregular and imperfect, and difficult to get out any substantial facts from them.

Q. You made some examination of those books ? A. I have within the last month.

Q. Are you able to tell us what the cost of the propelling cable and the machinery and apparatus, especially connected, amount to ?

A. As near as I can get at it from the books and papers and from information from parties that were in the employ of the old company, I think my former testimony is not far from right ; it is somewhere from one-quarter to one-third of a million dollars ; that is, the cable and machinery and the apparatus connected with it, and what has been paid for patents.

Q. Paid mostly to who ? A. It was all paid through Mr. Harvey ; he had the whole handling of it I believe ; it was all done through the period that he was the controlling manager.

Q. Has Mr. Jennings been employed by the present company, and if so, how and when, and what did he do ? A. He never has been employed by the present company to my knowledge, except on one occasion, about a year ago ; he then came to Albany, as I understood, to aid in getting passed a bill then before the Legislature that I had been attending to, and had got it through the railroad committee and Senate ; he was here, as I understand, some little time—I don't know how long—perhaps two or three weeks ; I then came to Albany ; soon after getting here I found him advocating this bill here, which I present you ; one evening Mr. Twombly said that this bill was here and Jennings was acting for the company ; I asked what it meant, and I got a copy of the bill, and I told our friends it was not a bill the company desired at all, but one that they would oppose ; I went to Mr. Pell, who introduced the bill, and explained the matter to him, and he said under the circumstances he should not advocate the bill, although at that time he was opposed to our road ; that bill was defeated in the House as soon as the circumstances were known in relation to it ; Mr. Jennings was paid for that service for the company, since which he has not been employed by them.

Q. It was a bill directly in opposition to the interests of the present company ? A. Yes, sir.

Q. I understand that you are perfectly familiar with the require-

ments of this company, and that you are an officer of the company ?

A. I am secretary and treasurer, and am familiar with the affairs of the company.

Q. From your knowledge of the company and its necessities, do you believe that it was necessary that the company should have had, in 1872, more legislation, in order that the company should fulfill their obligations to the public ? A. It was important certainly, in this respect, that capitalists were unwilling to put money in until they knew that legislation was favorable to them ; they had some charter rights without the bill as I understood, but it was important to them to have the bill that was introduced.

Q. This company had organized only a short time before this legislation was asked for ? A. Only the October before.

Q. Did you ever ride in a car upon this road propelled by this endless cable ? A. I never did ; I have conversed with various parties that have rode, among them one was at the time conductor.

Q. Did they tell you the sensation expressed by them in riding upon these cars propelled by this cable ? A. They did ; they said it was very jerky, to use their own terms ; jerking sometimes so that parties went against the windows so as to break them.

Mr. HARVEY—All this is objected to as hearsay evidence.

Q. Did you ever hear of any person having been ejected from the car by reason of that motion caused by this endless cable ?

The CHAIRMAN—If that is objected to I think it will hardly be admissible.

Mr. HARVEY—I think so.

Q. Was any one thrown out of the window by reason of the motion ?

Mr. HARVEY—I object to it as hearsay. (Objection sustained.)

Q. Do you know whether the motion of these cars propelled by the endless cable was considered a delightful motion ? A. I never have heard anybody say that except Mr. Harvey.

Q. Mr. Jennings said it ?

Mr. JENNINGS—I believe not.

Q. Or very easy you said, or something like that. Mr. Cowing, do you think of anything else that you would like to state in connection with this matter ? A. I know of nothing, except the fact that here is a copy of the bill that we are trying to get through the Senate ; I think it would be desirable for the company to have such legislation as this ; there is a provision in this bill that the Governor may fill the vacancy in the commission mentioned in the resolution.

Q. And that the legislation asked for in that bill is necessary for the company to have? A. I think it is; there is also a clause in this bill which reads: "Nothing in this act contained shall impair the legal or equitable rights of the West Side Elevated Patented Railroad Company of New York city, or any person who is or may have been a stockholder or creditor thereof;" that was introduced to obviate the possible objection to those who did join the new company; that is in the bill of the present company.

Q. They desire to have the bill passed with that provision in? A. Yes, sir.

*Cross-examination by Mr. HARVEY:*

Q. I would like to inquire how many dummies and how many cars there are represented by the \$100,000 expenditure that you mention? A. I don't think I have stated that there was \$100,000 in dummies and cars.

Q. How many dummies and cars are there on the road? A. Four dummies and eight cars put upon the road.

Q. How much has the road been extended in length since you became connected with it? A. Not any, except the piece now under contract to Fortieth street, and that is not built yet.

Q. You mentioned that Tracy, Dows and Scott had a majority of the directors at the time of the sale, and have continued to have them since; what are the names of those directors referred to? A. I think there were seven directors of the old company at the time of the sale; I think Tracy, Dows, E. W. Dunham and Mr. Wallace were considered as friendly to the interest of Dows and Tracy; I forget who the others were at the time; I believe Harvey and Pet-tengill were two.

Q. Who were the directors in the board of the new company, who represented the same control; what are their names? A. The interests in the new company are differently arranged from what they were in the old, as I understand it; I think I can give all the names in the new company.

Q. Your previous evidence was that they were the same control represented by Tracy and others and their associates; I want to know now who they are in the new? A. I don't think I have given any such testimony as you state.

Q. I refer to the testimony then? A. To-day you mean?

Q. Yes, sir; the question is, who represents the controlling interest in the present company; what are the names of the directors; I

want the names in the new company? A. It was in answer to Judge Fithian's testimony as to how these parties had control; I said, in another way, they had a majority through the board of directors.

Q. The names of the directors in the new company? A. William L. Scott, D. N. Barney, David Dows, John F. Tracy, A. H. Barney, Wm. L. Wallace, H. Kennedy, Milton Cortright, A. S. Barnes, Daniel Torrance, J. A. Cowing, J. D. Mairs; the others I don't at this moment recollect.

Q. You say that Dows, Tracy and Barney own over two-thirds of the stock in the company, and that there are some forty persons owning the balance; a large portion of those small owners made up of those who surrendered their bonds in the old company and took interest in the new? A. I think they are, nearly all of them; there may be one or two exceptions.

Q. Did you, in making purchase of the bonds, on the terms which Tracy authorized you to make as you have stated in your evidence, did you make it a condition that the parties should surrender their preferred stock with their bonds? A. In most cases the bonds were purchased and they surrendered their preferred and common stock both; not in all cases.

Q. At what rate did you buy the bonds? A. They were bought at twenty cents on the dollar in every case except one, I believe.

Q. In what case was that? A. It was in the case of Benedict, when he was paid a little more; I believe there has been a few scattering bonds paid for a little less than that.

Q. What was allowed for the preferred or common stock in this purchase? A. Nothing.

Q. Did you negotiate the exchange of interests of George S. Coe? A. I did.

Q. What was the rate that you allowed him? A. He was allowed the same rate as the others, and there was some small allowance made on the ground that he had acted as commissioner and received little or no pay; he was allowed a little more; I forget what it was now; it was an inconsiderable sum; it was on the ground he had done services which made him entitled to a little more.

Q. You said in your former evidence that Tracy and Scott stand high in a business community; do you understand them as being what we know as heavy operators in Wall street? A. I don't; they are men of large means that buy stocks as a matter of investment; but I don't understand that Tracy is a stock operator; an executive officer of the two roads, and that is understood to be his business.

Q. Were you in business in Buffalo in this State? A. I was.

Q. Did you ever fail or compromise in trade? (Objected to.)

The CHAIRMAN—He may answer.

A. I should like to be heard before answering that; if it has any bearing upon the question, the committee will direct me to answer it; Mr. Harvey has stated here what was his business; that he was an engineer, and if that point was up I could have brought William B. Ogden here to show that it wasn't so; that he was no engineer.

The CHAIRMAN—I cannot see how it will have any bearing upon the question raised by this resolution, as to whether the company has discharged its duties; a good deal of evidence has been admitted which, if I was sitting in a judicial capacity, it would have been excluded.

A. I haven't been entirely successful in business.

Q. That does not answer the question; have you ever failed or compromised in business? A. I have had my notes protested for non-payment.

Q. Have you ever been engaged in buying and selling notes in New York? (Objected to. Objection sustained.)

Mr. LITTLE—I understand you don't decline to answer? A. No, sir; but you objected to it.

Q. Is this bill that is submitted here in evidence, extracts of it, the one originally introduced by J. A. Cowing in the Senate committee this winter? (Objected to.)

Q. Is this the first bill which you caused to be introduced as the representative of the Elevated Company this winter in the Legislature? A. The bill that I have had here is the one reported by the Senate committee.

By Mr. LITTLE:

Q. At whose request? A. Reported by me, it is somewhat different from the original draft as introduced in the Senate; it was amended in the Senate committee.

Q. You speak of this provision for the protection of stock and holders in the old railroad; is that copied from a bill introduced last winter? A. It is, I believe, the same language in the bill introduced last winter.

Q. Was that provision put in there at the instance of the railroad committee originally, or at the request of the company? A. At the request of the company, and drafted by their attorney; I have



if they want it, in the handwriting of Charles Tracy.

*Re-direct examination continued by Mr. LITTLE :*

Q. The present company urged the passage of that bill? A. Yes, sir.

Q. The bill now pending in the Legislature, and in its present shape, was adopted and submitted by you as satisfactory to the company before it was reported, and was reported at your request? A. It was.

Mr. COWING—Suspend my examination for a moment to examine Mr. Foster.

WILLIAM FOSTER, being duly sworn, testified as follows :

*Examined by Mr. COWING :*

Q. Are you somewhat conversant with measures that are going on in regard to rapid transit in the city of New York? A. I have been somewhat interested in them, and am somewhat conversant with them.

Q. What do you know about a portion of the New York Elevated Railroad Company within the last year—what it has done and what its general popularity is this past year? A. I have been almost a daily patron of it, and it has afforded me accommodation, and in my estimation it has been a public benefit for persons residing in the upper part of the city, and doing business in the lower part.

Q. You had occasion to converse with others? A. Yes, sir; I believe that to be a popular opinion of the road.

*Cross-examined by Mr. HARVEY :*

Q. How much does it save you per trip in time? A. It saves about half an hour each way from Dey street to Thirtieth street.

J. A. COWING's examination continued :

*Examined by Mr. LITTLE :*

Q. Who were the principal persons appearing before this committee urging this for prosecution? A. So far as I know they have been Mr. Harvey and Mr. Jennings, and those that they have subpoenaed here.

Q. Who has asked all the questions on the part of the prosecution? A. Mr. Harvey or Mr. Jennings, I believe.

Q. Was a large amount of the common stock of the old company issued to persons without the payment of money? A. My impres-



sion is, that there was but a very little money paid for issues of stock of the old company.

*Re-cross examination by Mr. HARVEY :*

Q. You say that Harvey and Jennings have asked all the questions in this examination ; do you not consider Mr. Little as worthy of notice ? A. I consider Mr. Little is worthy of notice ; my answer to the former question, as I understood it, was that Harvey and Jennings asked all the questions on the part of the prosecution.

Q. Who has asked most of the questions on the part of the defense ? A. If the present railroad company are considered the defense here, probably I have asked the most myself ; Mr. Little and Charles Tracy have asked some questions ; I don't remember of anybody else asking any, except the gentlemen of the committee.

STEPHEN O. JENNINGS, being recalled, testified as follows :

*Examined by Mr. HARVEY :*

Q. Were you employed by what is known as the present New York Elevated Railway Company to attend to their interest at Albany, at any time during 1872, and if so, when and under what circumstances ? A. It was probably about the first of March, I think, or latter part of February, a year ago.

Q. By whom were you so engaged, by what person ? A. By authority of Wm. M. Scott, president ; W. L. Wallace, vice-president ; through Mr. Wallace.

Q. Who personally engaged your services ? A. W. L. Wallace.

Q. After he spoke to you on the subject, did you come to Albany ? A. I did.

Q. What compensation was paid you for what you did there ? A. Nothing but my expenses ; no salary.

Q. Can you say about the sum that was paid you for expenses ? A. I was here probably in the neighborhood of three or four weeks, and I think I received about \$150 ; I don't recollect exactly.

Q. About \$150 ? A. I think so ; traveling and hotel expenses.

Q. Was your attendance here in the nature of an exploring trip, to see what was advisable to be done from time to time ? A. It was ; Mr. Cowing had been here for the company, as he stated, which proved unsatisfactory to them, as they stated to me ; the legislation they wanted he hadn't obtained ; they sent me up to inquire into his operations here, and if, in my judgment (having formerly been connected with the company), whether he could probably get the legislation.

Q. Did you subsequently report to Mr. Wallace the result of your investigation at Albany? A. I did, weekly, when I went down.

Q. What report did you give him? A. The result was that, having formerly, the same winter, opposed the legislation, what the company wanted, I found the company's affairs some muddled up here, and that I or no one else could probably get what legislation they wanted last session.

Q. Did you notify him that your connection with the company would from that time cease, and that you would be under no further obligations to the company to serve them, or consider yourself in their employ? (Objected to.)

The CHAIRMAN—Let him answer the question.

A. I did notify them, and withdrew from the further service of the company.

Q. Was that prior to the introduction of this bill that has been referred to, as advocated by you in the Assembly? A. I could not say now.

Q. Were you probably understood as released from any engagement from them for the latter half of the session? (Objected to. Objection sustained.)

Q. How early in the session was the notice given?

Mr. LITTLE—He has sworn he could not tell whether it was before or after the bill was introduced.

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ALBANY, *May* 6, 1873.

Committee met, when the following testimony was taken; Mr. VEDDER, chairman.

S. O. JENNINGS recalled:

*Examined by* Mr. HARVEY:

Q. Have you read the testimony of J. A. Cowing, taken at the Delavan House? A. I have.

Q. Is it, in matters relating to you personally, in the main, true or false? A. It is false; most egregiously false.

Q. Was there any ground for Mr. Cowing to assume that you was bent on black-mailing the company? A. None whatever.

Q. Did he seek interviews with you? (Objected to. Objection overruled.) A. He did; he wrote a letter to the president of the company.

Mr. SMITH—Confine the evidence to a mere denial only.

Q. Will you produce the letter? A. I have a letter from Cowing to Wallace, seeking an interview with me, in view of a settlement.

“W. L. WALLACE, Esq.:

“DEAR SIR.—I didn't get Mr. Jennings' letter the 27th, until 4. P. M., when I sent to hotel and to your store, and learned that he had gone. I will be at the new office, 7 Broadway, all day to-morrow. He Mr. J——, call on you, and will see him here if he will call.

“J. A. COWING.”

“January 31, 1873.”

I took the letter and went to Cowing, and he acknowledged writing the letter to Wallace, and then wanted to know my terms of settlement with the company; I told him I had none to offer to him; he then proposed terms to me, and said if I did not comply with them, among the rest was, to write a letter to Mr. Prince and Oakley, of my own account, agreeing to keep away from Albany, for having them to support such legislation as they didn't want; if I did not do that, that he would represent to the Senate and members of, here at Albany, that I had called there that day for the purpose of black-mailing the company, and should so state to them; that is what the word black-mailing grew out of; he has carried his threat out.

*Cross-examined by Mr. SMITH:*

Q. What was you attending here for to-day; your business here to defend yourself against this charge of black-mailing? A. That was one.

Q. Did you think it was necessary in order to protect your character to come here and make this statement? A. I do not think it was, coming from the source it did; I did not know but it might have some influence on gentlemen like yourself.

Q. I notice that Harvey read these questions off that you have answered here; have you and he been conjuring things up together before coming here? A. No conjuring; have agreed for him to ask me some questions.

Q. You agreed what they were to be? A. Yes, sir.

Q. The questions were all agreed on beforehand? A. Yes, sir; you are right, sir.

C. T. HARVEY, recalled:

*Examined by Mr. JENNINGS:*

Q. Have you read the testimony of J. A. Cowing, originally taken at the Delavan House? A. I have.

true or false? A. False, almost the whole of it.

Q. Does Mr. Cowing state with any reasonable accuracy the financial condition of the company? A. He does not; he has made errors in his statement nearly \$100,000 in one instance; nearly \$200,000 in another, not to refer to other small items.

Q. What was the condition of the company at the time when the Tracy party took control? (Objected to as opening the whole question again.)

The Witness—I propose to tell what the real case was; it is merely rebuttal. (Objection overruled.) A. The total indebtedness of the company, including stock and bonds, was \$1,150,000.

Q. How much? A. Very near \$1,150,000; all the difference between that and the \$1,900,000, which Cowen refers to in his evidence, is either due to the mismanagement of the Tracy party or the errors in Mr. Cowing's statement, and is chargeable partly to both.

Q. What do you know as to the value that Tracy and his associates valued that property and franchise up to the date of the sheriff's sale? A. Mr. Scott stated that the railroad and the franchise connected with it was at that time worth its entire cost; the statement was made within ninety days of the sheriff's sale; D. A. Barney, another of the associates of Tracy, stated to me that he considered it worth the entire outlay made up to the time of the sheriff's sale, that is, the railway and the franchise connected with it.

J. A. COWING recalled:

*Examined by Mr. SMITH:*

Q. Was the interview, to which that letter refers which Mr. Jennings has produced, proposed by him, and have you the letter in which he proposed it, and will you produce it? A. I have a letter that Mr. Jennings wrote asking me to meet him at the Merchants' Hotel; I received the letter an hour after the time he appointed, and not knowing where that letter was I wrote to Wallace; and I have that letter, which I will furnish to the committee.

Mr. HARVEY—I ask the committee to receive and consider my objection to this whole Delavan House testimony; I still think it should all be ruled out. There are statements there made, which are not true. Statements that Mr. Cowing makes upon oath, that the committee themselves know not to be true. Cowing says "Harvey has always attacked everything attempted to be done; the com-

pany was embarrassed from the entire failure of stationary power." And the evidence shows that they took pains to stop the power themselves. He says that "the laws have been properly complied with." I judge that the committee knows about that. He says "Harvey appeared to be his own questioner and answerer." The committee knows that was not the case, and I think that all such stuff should be excluded, out of self-respect to the committee. He says "Harvey seems to have asked all the questions of himself and of others." And he says at the conclusion in this indefinite way "I looked upon this all as black-mailing." I would submit to the committee that the whole of this should be stricken out.

Mr. SMITH—Before the testimony was taken to-day, we proposed to the committee that they should have their option, either to rebut what they claim were the offensive expressions as to Harvey and Jennings, or have them stricken out; and they elected not to have them stricken out and have given their testimony, and I think that Mr. Harvey now very inappropriately asks to have it stricken out.

The CHAIRMAN—The motion of Mr. Harvey to strike out certain testimony, called by him Delavan House testimony, is not granted.

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